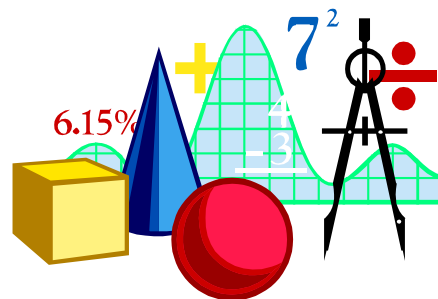


# MATHEMATICS FOR PRIMARY THREE FIRST TERM

PREPARED BY  
*Mr.* MAHMOUD MOHEB





**Name :** .....

**School :** .....

**Grade :** ..... **Class :** .....





**Teacher's name :** .....











# Chapter One





## I THE PATTERN





Choose the correct answer:

- (1)  ...
- a.       b.       c. 

- (2)  ...
- a.       b.       c. 

- (3)  ...
- a.       b.       c. 

- (4)  ...
- a.       b.       c. 

- (5)  ...
- a.       b.       c. 

## Choose the correct answer:

(1) 10      20      30      40      50      60      ...  
 a. 50      b. 20      c. 70

(2) 5      10      15      20      25      30      ...  
 a. 35      b. 40      c. 45

(3) 2      4      6      8      10      12      ...  
 a. 13      b. 14      c. 15

(4) 20      30      40      50      60      70      ...  
 a. 71      b. 75      c. 80

(5) 21      22      23      24      25      ...  
 a. 20      b. 26      c. 30

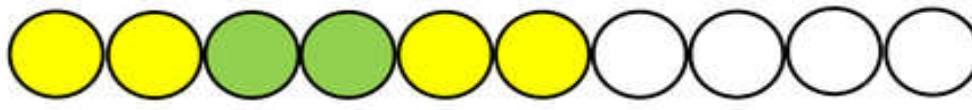
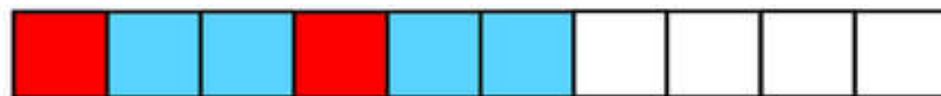
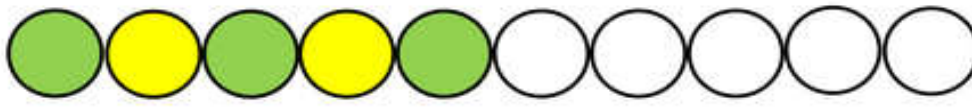
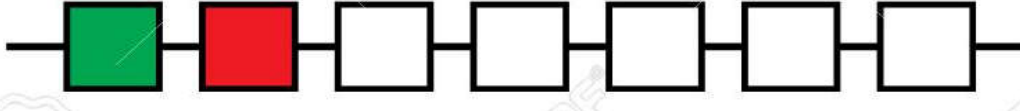
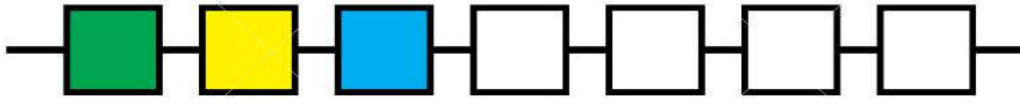
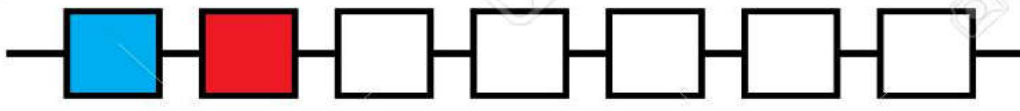
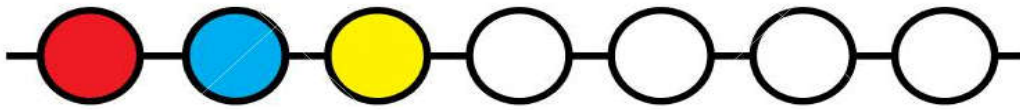
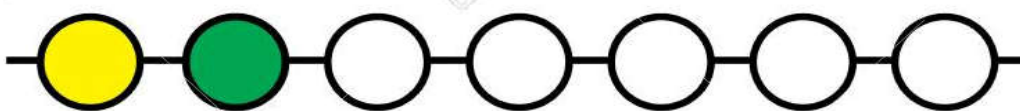
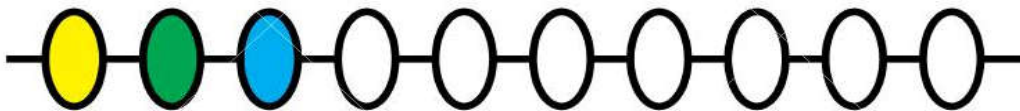
(6) 1      3      5      7      9      ...  
 a. 10      b. 11      c. 12

(7) 34      44      54      64      74      ...  
 a. 75      b. 76      c. 84

(8) 90      80      70      60      50      ...  
 a. 60      b. 40      c. 20

(9) 71      61      51      41      31      ...  
 a. 21      b. 22      c. 23

# Complete the pattern using colors:



Look at each dot image. Build each image using counters. What is the pattern? Figure out the next two images in the pattern. Draw them in the boxes.

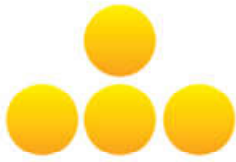


Image One

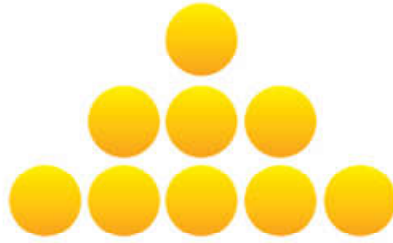


Image Two

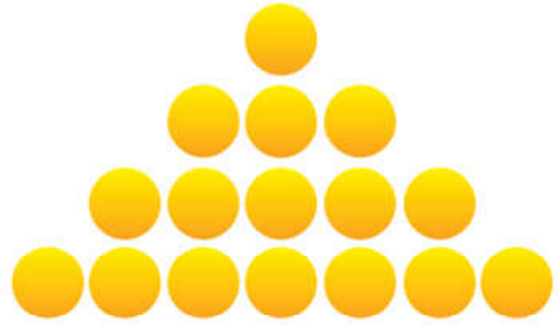


Image Three

Image FOUR

Image FIVE

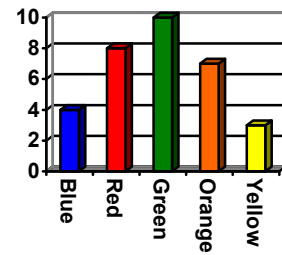
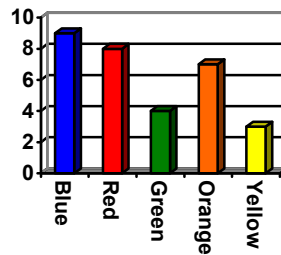
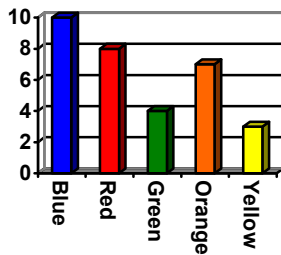
Can you predict how many counters in the 10<sup>th</sup> image? ...

# 2 REPRESENTING DATA

Choose the correct bar graph:

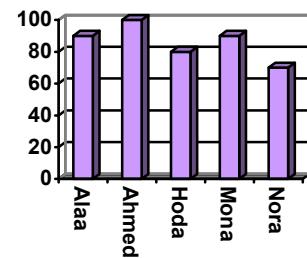
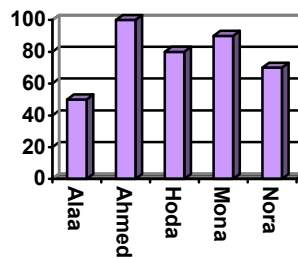
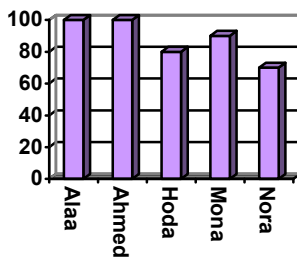
(1)

Favorite color	Blue	Red	Green	Orange	Yellow
No. of students	10	8	4	7	3



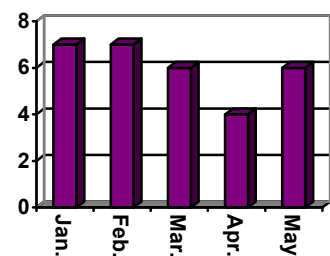
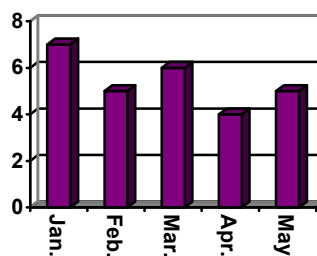
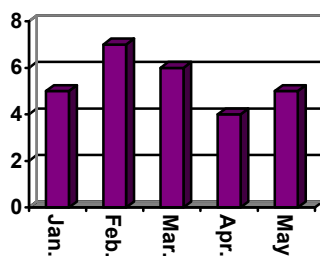
(2)

Name	Alaa	Ahmed	Hoda	Mona	Nora
Marks	90	100	80	90	70



(3)

Month	Jan.	Feb.	Mar.	Apr.	May
Points	7	5	6	4	5



# LINE PLOTS

Antoine surveyed his friends to find out how often they went to a movie theater. The table shows the results.

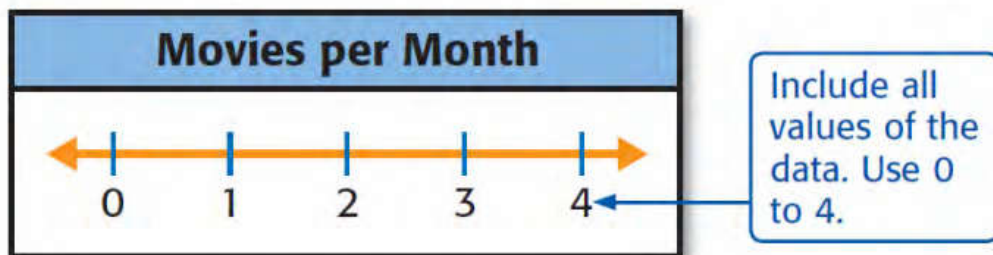
Movies Per Month			
Zack 0	Carla 1	Grace 2	Ivan 1
Ricardo 1	Nina 2	Betty 0	Tama 1
Latisha 2	Kelley 1	Gabe 4	Ademo 1
David 0	Judie 1	Drew 1	Lauren 3



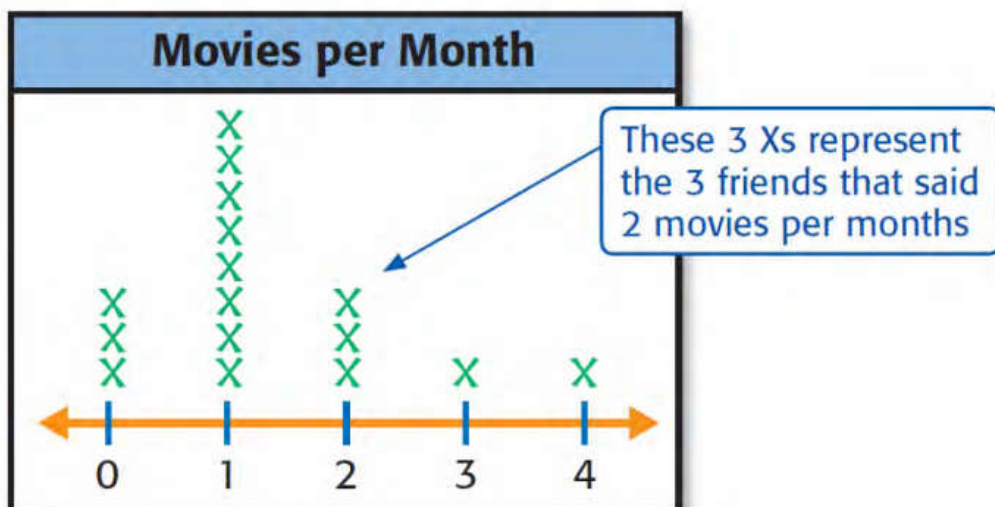
## Make a Line Plot

**MOVIES** Make a line plot for the survey results.

**Step 1** Draw and label a number line. Include all values of the data. Give it a title that describes the data.



**Step 2** Draw an X above the number for each response.





Display each set of data in a line plot:

Third-Grade Shoe Size			
Jose 2	Ana 4	Julia 8	Martin 3
Lin 6	Tanya 5	Ronaldo 3	Cheye 4
William 4	Cole 5	Nat 4	Gabriel 5

Shoe size

Size	Tally	Number
2		.....
3		.....
4		.....
5		.....
6		.....
8		.....



KEY

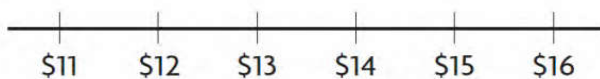
Weekly Time Spent on Homework	
Time (hours)	Tally
8	
9	
10	
11	



KEY

Use the data in the table to make a line plot.

How Many Shirts Were Sold at Each Price?	
Price	Number Sold
\$11	1
\$12	4
\$13	6
\$14	4
\$15	0
\$16	2



How Many Shirts Were Sold at Each Price?

1. How many shirts sold for \$12?

\_\_\_\_\_

2. How many shirts were sold for \$13 or more?

\_\_\_\_\_

## Exercises

Create the line plot using the set of given numbers:

(1)

5	6	4	7	8	9	8	7
6	5	4	4	5	4	4	6



(2)

1	2	3	2	5	6	5	7
10	1	1	4	9	1	4	8



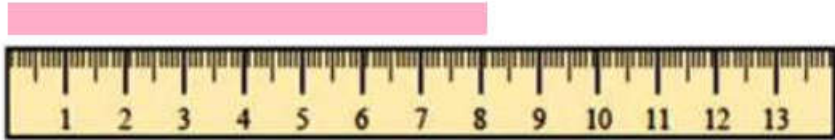
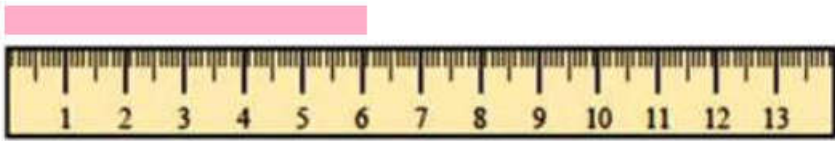
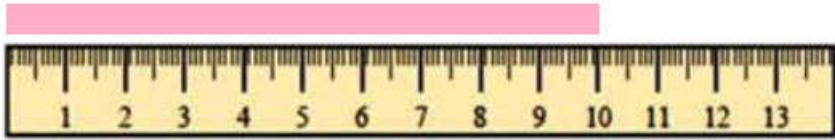
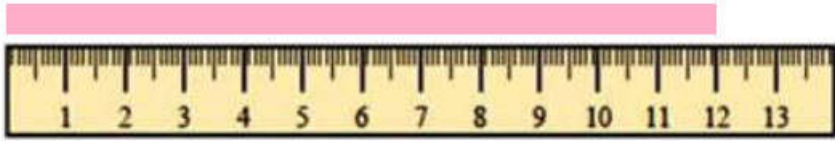
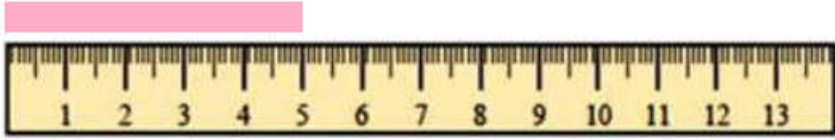
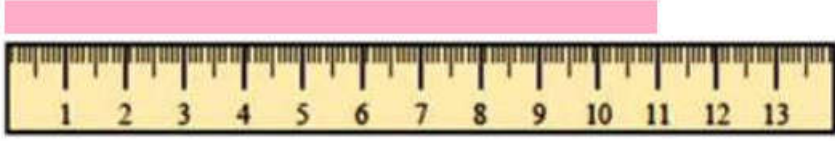
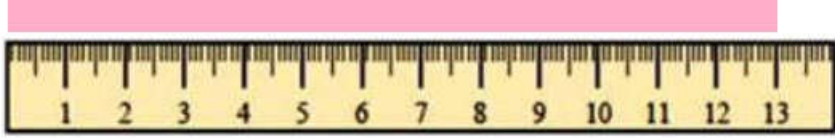
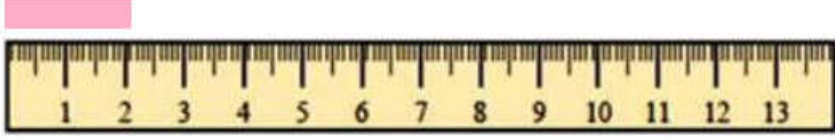
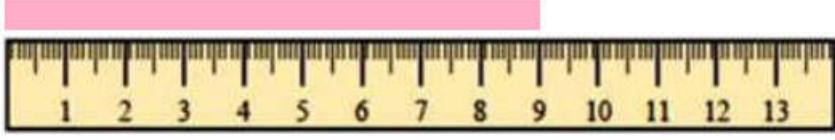
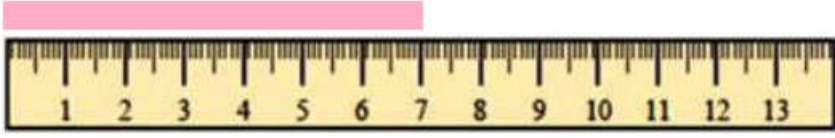
(3)

20	22	22	23	23	23	23	24
25	26	27	28	28	28	29	29









# 3 MEASURING LENGTH

Complete the table:

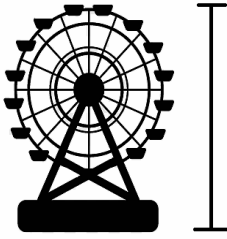
No.	Bars	length
(1)		..... cm
(2)		..... cm
(3)		..... cm
(4)		..... cm
(5)		..... cm
(6)		..... cm
(7)		..... cm
(8)		..... cm
(9)		..... cm
(10)		..... cm

Look at the images below, and then complete the table:

IMAGES	METERS OR CENTIMETERS?
	
	
	
	
	
	

## Choose the best answer:

(1) Ferris Wheel



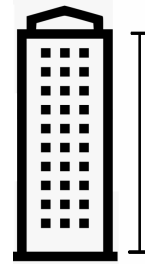
- a. 30 centimeters
- b. 5 meters
- c. 20 meters

(2) Screw



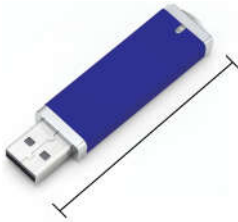
- a. 20 centimeters
- b. 1 meter
- c. 3 centimeters

(3) Building



- a. 300 centimeters
- b. 3 meters
- c. 30 meters

(4) Flash Memory



- a. 6 centimeters
- b. 30 centimeters
- c. 20 centimeters

(5) Horse



- a. 90 centimeters
- b. 2 meters
- c. 30 centimeters

(6) Key



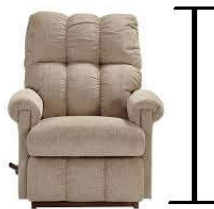
- a. 15 centimeters
- b. 5 centimeters
- c. 1 meter

(7) Notebook



- a. 15 centimeters
- b. 5 meters
- c. 25 centimeters

(8) Recliner



- a. 30 centimeters
- b. 1 meter
- c. 50 centimeters

(9) Can of Beans



- a. 120 centimeters
- b. 3 meters
- c. 10 centimeters

## Choose the suitable answer:

1. The yarn is about 5 centimeters long. Circle the best estimate for the length of the crayon.



10 centimeters

15 centimeters



20 centimeters

2. The string is about 12 centimeters long. Circle the best estimate for the length of the straw.



3 centimeters



7 centimeters

11 centimeters

3. The rope is about 8 centimeters long. Circle the best estimate for the length of the paper clip.



2 centimeters

4 centimeters



8 centimeters

4. The pencil is about 11 centimeters long. Circle the best estimate for the length of the chain.



6 centimeters

10 centimeters



13 centimeters

5. The hair clip is about 7 centimeters long. Circle the best estimate for the length of the yarn.



10 centimeters

17 centimeters



22 centimeters

## Circle the better estimation:

1.



15 cm long      50 cm long

2.



1 m tall      10 m tall

3.



3 cm long      3 m long

4.



10 m tall      10 cm tall

## Estimate the length then complete:

Find the real object.	Measure.
<p>chair</p>	<p>_____ centimeters</p> <p>_____ meters</p>
<p>teacher's desk</p>	<p>_____ centimeters</p> <p>_____ meters</p>
<p>wall</p>	<p>_____ centimeters</p> <p>_____ meters</p>



# Chapter Two

## I THOUSANDS

Write the correct number:

Thousands	Hundreds	Tens	Ones	The number
				2354
				.....
				.....
				.....
				.....
				.....

### The value and the place value

<p>I am in the <b>hundred thousands</b> place</p> <p>My value is <b>200 000</b></p>	<p>I am in the <b>ten thousands</b> place</p> <p>My value is <b>40 000</b></p>	<p>I am in the <b>thousands</b> place</p> <p>My value is <b>1 000</b></p>	<p>I am in the <b>hundreds</b> place</p> <p>My value is <b>900</b></p>	<p>I am in the <b>tens</b> place</p> <p>My value is <b>80</b></p>	<p>I am in the <b>ones</b> place</p> <p>My value is <b>7</b></p>
---	--	---	--	---	--

Write the value and the place value of the red digit:

The number	The place value	The value
245 136	Thousands	5 000
368 132	.....	.....
703 201	.....	.....
300 109	.....	.....
623 871	.....	.....
36 950	.....	.....
79 456	.....	.....
9 234	.....	.....
652 348	.....	.....
14 369	.....	.....
258 963	.....	.....
1 965	.....	.....
700 000	.....	.....
150 000	.....	.....
784 596	.....	.....
451 263	.....	.....
102 000	.....	.....

## Complete the Table:

Standard form	Expanded form
245 136 =	200 000 + 40 000 + 5000 + 100 + 30 + 6
368 132 =	.....
703 201 =	.....
300 109 =	.....
623 871 =	.....
36 950 =	.....
79 456 =	.....
9 234 =	.....
3 001 =	.....
..... =	600 000 + 50 000 + 2 000 + 300 + 40 + 8
..... =	10 000 + 4 000 + 300 + 60 + 9
..... =	200 000 + 8 000 + 900 + 3
..... =	1 000 + 900 + 60 + 5
..... =	700 000 + 200 + 4
..... =	100 000 + 50 000 + 90
..... =	20 000 + 900 + 8
..... =	600 000 + 20 000 + 3000

Complete using (<), (>) or (=):

23 456 ○ 33 456

34 901 ○ 21 479

10 478 ○ 9 876

124 200 ○ 321 100

987 143 ○ 976 143

801 900 ○ 800 000

65 243 ○  $60\,000 + 5\,000 + 200 + 40 + 3$

32 469 ○  $90\,000 + 1\,000 + 400 + 60 + 9$

93 241 ○  $800\,000 + 20\,000 + 300 + 20 + 1$

503 236 ○  $500\,000 + 3\,000 + 200 + 30 + 7$

600 500 ○ seven hundred thousand

Order from smallest to greatest: ↑

1 426 178 , 320 198 , 102 329 , 258 987

..... , ..... , ..... , .....

2 536 279 , 92 358 , 120 350 , 471 084

..... , ..... , ..... , .....

3 321 273 , 900 000 , 400 329 , 200 900

..... , ..... , ..... , .....

4 321 957 , 91 300 , 85 618 , 300 987

..... , ..... , ..... , .....



Order from greatest to smallest: ↓

1 426 178 , 320 198 , 102 329 , 258 987

..... , ..... , ..... , .....

2 536 279 , 92 358 , 120 350 , 471 084

..... , ..... , ..... , .....

3 321 273 , 900 000 , 400 329 , 200 900

..... , ..... , ..... , .....

4 321 957 , 91 300 , 85 618 , 300 987

..... , ..... , ..... , .....

# 2 ARRAYS



Number of rows: .....

Number of apples in each row: .....

Total number of apples: .....



Number of rows: .....

Number of cupcakes in each row: .....

Total number of cupcakes: .....



Number of rows: .....

Number of biscuits in each row: .....

Total number of biscuits: .....



Number of rows: .....

Number of donuts in each row: .....

Total number of donuts: .....



Number of rows: .....

Number of cupcakes each row: .....

Total number of cupcakes: .....



Number of rows: .....

Number of mangoes in each row: .....

Total number of mangoes: .....



Number of rows: .....  
 Number of eggs in each row: .....  
 Total number of eggs: .....



Number of rows: .....  
 Number of donuts in each row: .....  
 Total number of donuts: .....



Number of columns: .....  
 Number of stars in each column: .....  
 Total number of stars: .....



Number of columns: .....  
 Number of stars in each column: .....  
 Total number of stars: .....



Number of columns: .....  
 Number of stars in each column: .....  
 Total number of stars: .....



Number of columns: .....  
 Number of stars in each column: .....  
 Total number of stars: .....



Number of columns: .....  
 Number of stars in each column: .....  
 Total number of stars: .....



Number of columns: .....  
 Number of stars in each column: .....  
 Total number of stars: .....



Number of columns: .....  
 Number of stars in each column: .....  
 Total number of stars: .....



Number of columns: .....  
 Number of stars in each column: .....  
 Total number of stars: .....

## Example:

Example:

Repeated Addition (+)  $3 + 3 + 3 = 9$ Multiplication ( $\times$ )  $3 \times 3 = 9$ 

Comparison  $\underline{\quad 9 \quad}$   $<$   $\underline{\quad 15 \quad}$   
 (My product) (Partner's product)

Round One:

Repeated Addition (+)

Multiplication ( $\times$ )

Comparison  $\underline{\quad \quad}$   $\bigcirc$   $\underline{\quad \quad}$   
 (My product) (Partner's product)

Round Two:

Repeated Addition (+)

Multiplication ( $\times$ )

Comparison  $\underline{\quad \quad}$   $\bigcirc$   $\underline{\quad \quad}$   
 (My product) (Partner's product)



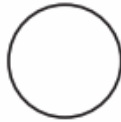
Round Three:

Repeated Addition (+)

Multiplication (×)

Comparison

\_\_\_\_\_



\_\_\_\_\_

(My product)

(Partner's product)

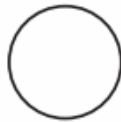
Round Four:

Repeated Addition (+)

Multiplication (×)

Comparison

\_\_\_\_\_



\_\_\_\_\_

(My product)

(Partner's product)

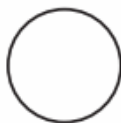
Round Five:

Repeated Addition (+)

Multiplication (×)

Comparison

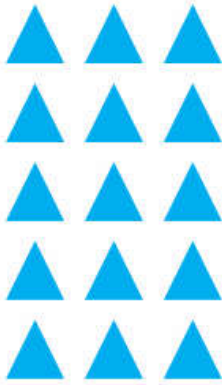
\_\_\_\_\_



\_\_\_\_\_

(My product)

(Partner's product)

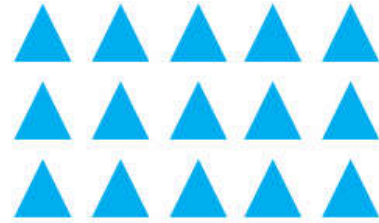


Number of rows: \_\_\_\_\_

Number of columns: \_\_\_\_\_

Total number of triangles: \_\_\_\_\_

$$\begin{array}{c} \underline{\hspace{2cm}} \\ \text{rows} \end{array} \times \begin{array}{c} \underline{\hspace{2cm}} \\ \text{columns} \end{array} = \begin{array}{c} \underline{\hspace{2cm}} \\ \text{product} \end{array}$$



Number of rows: \_\_\_\_\_

Number of columns: \_\_\_\_\_

Total number of triangles: \_\_\_\_\_

$$\begin{array}{c} \underline{\hspace{2cm}} \\ \text{rows} \end{array} \times \begin{array}{c} \underline{\hspace{2cm}} \\ \text{columns} \end{array} = \begin{array}{c} \underline{\hspace{2cm}} \\ \text{product} \end{array}$$



Number of rows: \_\_\_\_\_

Number of columns: \_\_\_\_\_

Total number of hearts: \_\_\_\_\_

$$\begin{array}{c} \underline{\hspace{2cm}} \\ \text{rows} \end{array} \times \begin{array}{c} \underline{\hspace{2cm}} \\ \text{columns} \end{array} = \begin{array}{c} \underline{\hspace{2cm}} \\ \text{product} \end{array}$$

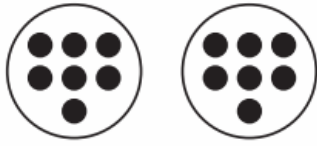


Number of rows: \_\_\_\_\_

Number of columns: \_\_\_\_\_

Total number of hearts: \_\_\_\_\_

$$\begin{array}{c} \underline{\hspace{2cm}} \\ \text{rows} \end{array} \times \begin{array}{c} \underline{\hspace{2cm}} \\ \text{columns} \end{array} = \begin{array}{c} \underline{\hspace{2cm}} \\ \text{product} \end{array}$$

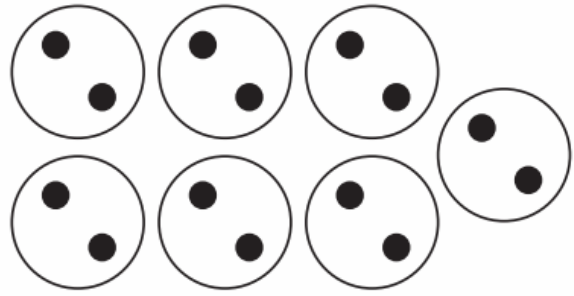


Number of circles: \_\_\_\_\_

Number of dots: \_\_\_\_\_

Total number of dots: \_\_\_\_\_

$$\begin{array}{r} \underline{\hspace{2cm}} \quad \times \quad \underline{\hspace{2cm}} \quad = \quad \underline{\hspace{2cm}} \\ \text{circles} \quad \text{dots} \quad \text{product} \end{array}$$

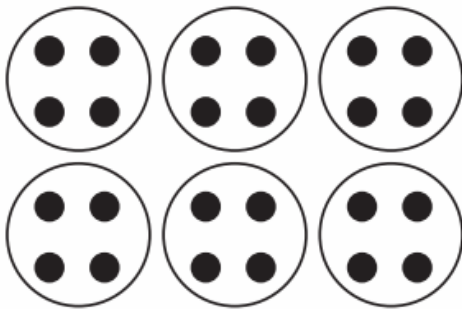


Number of circles: \_\_\_\_\_

Number of dots: \_\_\_\_\_

Total number of dots: \_\_\_\_\_

$$\begin{array}{r} \underline{\hspace{2cm}} \quad \times \quad \underline{\hspace{2cm}} \quad = \quad \underline{\hspace{2cm}} \\ \text{circles} \quad \text{dots} \quad \text{product} \end{array}$$

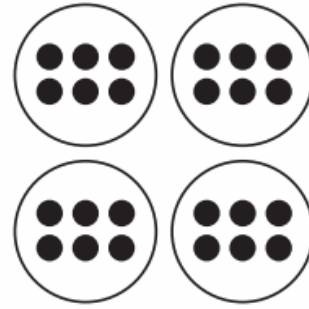


Number of circles: \_\_\_\_\_

Number of dots: \_\_\_\_\_

Total number of dots: \_\_\_\_\_

$$\begin{array}{r} \underline{\hspace{2cm}} \quad \times \quad \underline{\hspace{2cm}} \quad = \quad \underline{\hspace{2cm}} \\ \text{circles} \quad \text{dots} \quad \text{product} \end{array}$$



Number of circles: \_\_\_\_\_

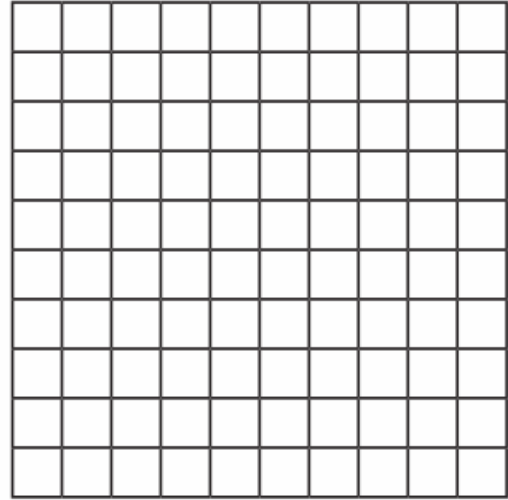
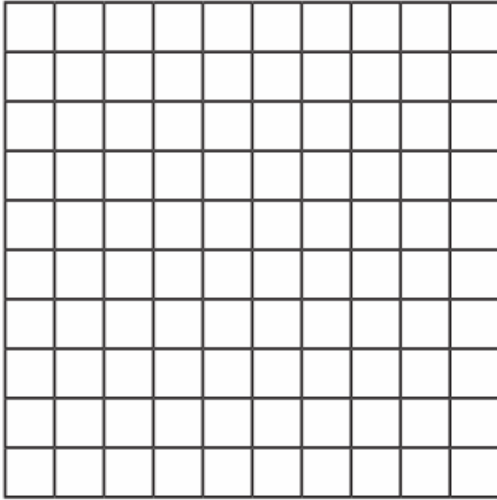
Number of dots: \_\_\_\_\_

Total number of dots: \_\_\_\_\_

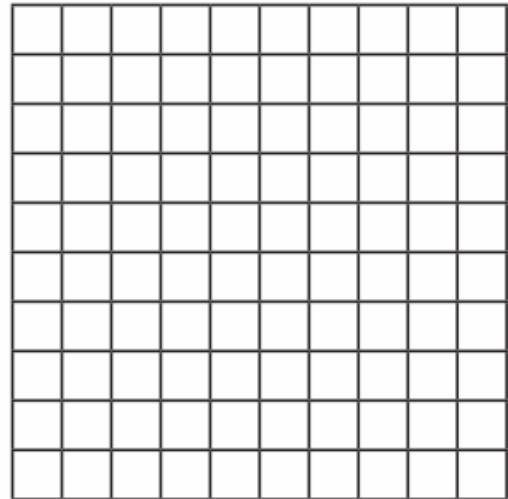
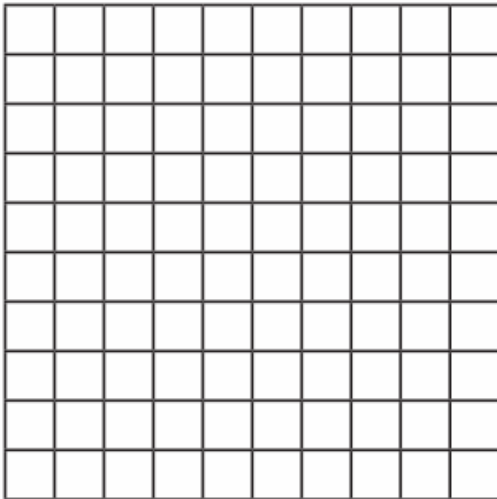
$$\begin{array}{r} \underline{\hspace{2cm}} \quad \times \quad \underline{\hspace{2cm}} \quad = \quad \underline{\hspace{2cm}} \\ \text{circles} \quad \text{dots} \quad \text{product} \end{array}$$

Directions: On the grids below, draw arrays that prove the Commutative Property of Multiplication. Label your grids with the **factors** (the two numbers you are multiplying) and **products** (the answers).

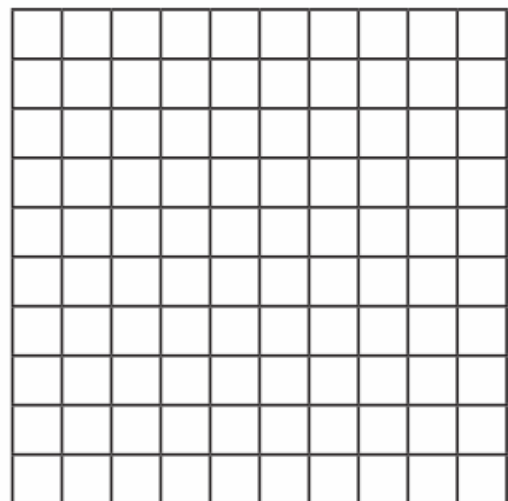
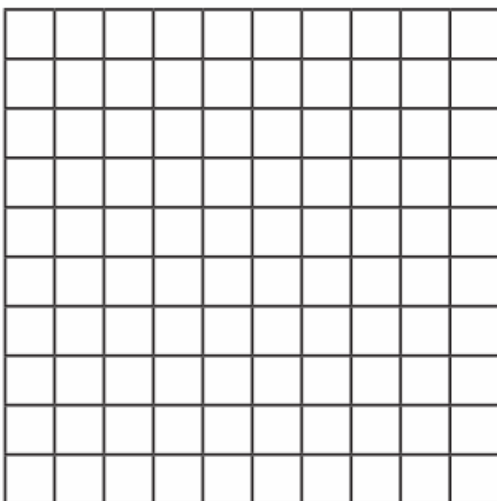
1.



2.



3.



1. Write a multiplication sentence for the array.

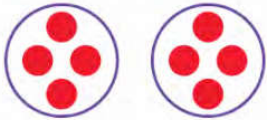


\_\_\_\_\_

\_\_\_\_\_

Write a multiplication sentence for the model. Then use the Commutative Property of Multiplication to write a related multiplication sentence.

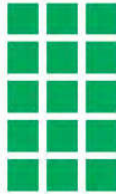
2.



$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

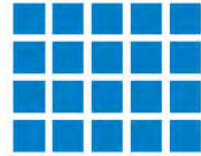
3.



$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

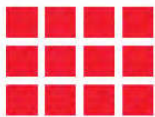
4.



$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

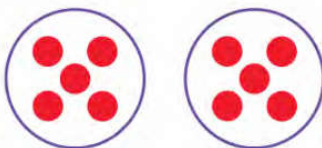
5.



$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

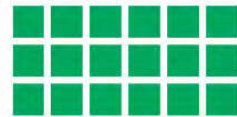
6.



$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

7.



$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

## Chapter Three

# I APPLICATIONS

**Example problem:** Farha went to the store to buy rolls for a big family dinner. At the store, she bought 4 bags of rolls. Each bag contained 5 rolls. How many rolls did Farha buy?

**Work Space:**

Multiplication equation: \_\_\_\_\_

1. On Samira's walk home she saw 6 cars. If each car has 4 wheels, how many wheels did she see in all?

**Work Space:**

Multiplication equation: \_\_\_\_\_

2. Manal brought 6 bags of cookies to school. Each bag had 3 cookies in it. How many cookies were there all together?

**Work Space:**

Multiplication equation: \_\_\_\_\_

3. Malek runs 3 miles each day. How many miles does he run in 7 days?

**Work Space:**

Multiplication equation: \_\_\_\_\_

4. A bag of oranges holds 4 oranges. How many oranges are in 8 bags?

**Work Space:**

Multiplication equation: \_\_\_\_\_

5. It takes a rocket 7 seconds to travel one kilometer. How many seconds will it take to travel 4 kilometers?

**Work Space:**

Multiplication equation: \_\_\_\_\_

6. Each pack of pencils contains 8 pencils. How many pencils are in 3 packs?

**Work Space:**

Multiplication equation: \_\_\_\_\_

# 2 MULTIPLICATION

Use the 120 Chart below to complete the following:

- Color the multiples of 2 \_\_\_\_\_ (color stated by teacher).
- Color the multiples of 3 \_\_\_\_\_ (color stated by teacher).
- Respond to the prompts at the bottom of the page.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

List the first 10 multiples of 2.

\_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_

List the first 10 multiples of 3.

\_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_

List all of the multiples you found that 2 and 3 share:





# TABLE 2



Complete:

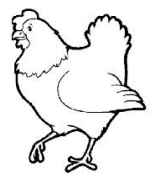
(a) The number of legs of 2 hens = ... × ... = ...

(b) The number of legs of 3 hens = ... × ... = ...

(c) The number of legs of 5 hens = ... × ... = ...

(d) The number of legs of 8 hens = ... × ... = ...

(e) The number of legs of 9 hens = ... × ... = ...





# TABLE 3



Complete:

- (a) The Price of 2 pens = ... × ... = ...
- (b) The Price of 5 pens = ... × ... = ...
- (c) The Price of 3 pens = ... × ... = ...
- (d) The Price of 7 pens = ... × ... = ...
- (e) The Price of 9 pens = ... × ... = ...
- (f) The Price of 8 pens = ... × ... = ...





Use the 120 Chart to complete the following:

- Color the multiples of 10 \_\_\_\_\_ (color stated by teacher).

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

Write the equations for the multiples of ten. The first two have been done for you.

$$10 \times 1 = 10$$

$$10 \times \underline{\quad} = \underline{\quad}$$

$$10 \times 2 = 20$$

$$10 \times \underline{\quad} = \underline{\quad}$$

$$10 \times 3 = \underline{\quad}$$

$$10 \times \underline{\quad} = \underline{\quad}$$

$$10 \times 4 = \underline{\quad}$$

$$10 \times \underline{\quad} = \underline{\quad}$$

$$10 \times \underline{\quad} = \underline{\quad}$$

$$10 \times \underline{\quad} = \underline{\quad}$$

$$10 \times \underline{\quad} = \underline{\quad}$$

$$10 \times \underline{\quad} = \underline{\quad}$$

# TABLE 10





# TABLE 4







# TABLE 5



Use the 120 Chart on the previous page to complete the following:

- Color the multiples of 5 \_\_\_\_\_ (color stated by teacher).
- Write the equations for the multiples of five. The first two have been done for you.

$$5 \times 1 = 5$$

$$5 \times \underline{\quad} = \underline{\quad}$$

$$5 \times 2 = 10$$

$$5 \times \underline{\quad} = \underline{\quad}$$

$$5 \times 3 = \underline{\quad}$$

$$5 \times \underline{\quad} = \underline{\quad}$$

$$5 \times 4 = \underline{\quad}$$

$$5 \times \underline{\quad} = \underline{\quad}$$

$$5 \times \underline{\quad} = \underline{\quad}$$

$$5 \times \underline{\quad} = \underline{\quad}$$

$$5 \times \underline{\quad} = \underline{\quad}$$

$$5 \times \underline{\quad} = \underline{\quad}$$



$\begin{array}{r} 5 \\ \times 1 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 10 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 11 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 12 \\ \hline \end{array}$
--	--	--	--	--	--	--	--	--	---	---	---

$\begin{array}{r} 1 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 11 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 12 \\ \times 5 \\ \hline \end{array}$
--	--	--	--	--	--	--	--	--	---	---	---

$\begin{array}{r} 5 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 10 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 12 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 11 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 1 \\ \hline \end{array}$
--	--	--	--	---	---	---	--	--	--	--	--

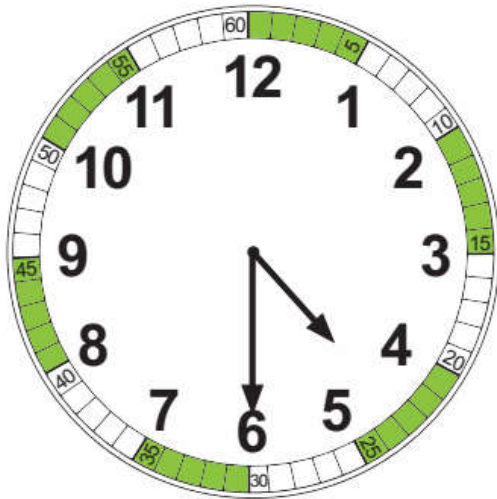
$\begin{array}{r} 5 \\ \times 1 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 10 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 11 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 12 \\ \hline \end{array}$
--	--	--	--	--	--	--	---	--	---	--	---



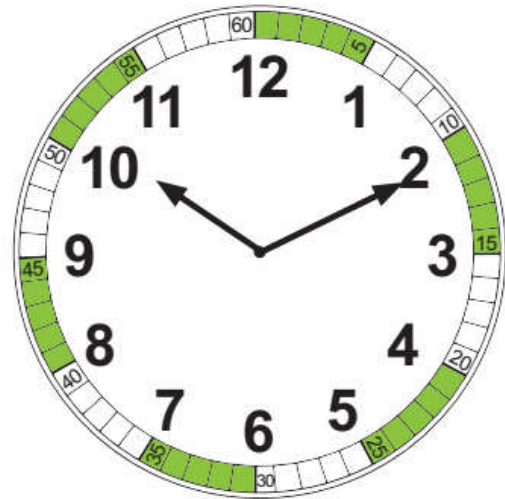
# APPLICATION



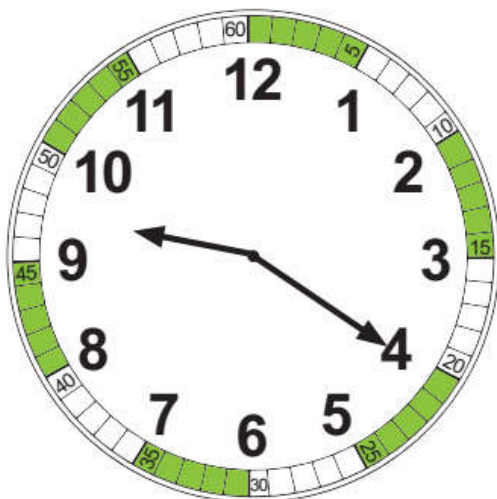
Directions: Look at each of the clocks below. Determine the time on the analog clock and write the digital time below. Remember that each hour number represents a group of 5 minutes.



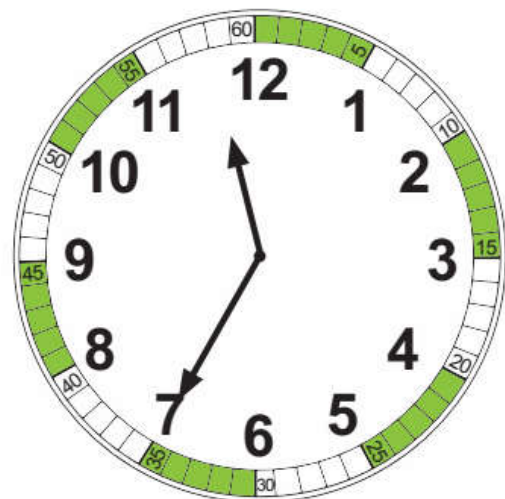
\_\_\_\_\_ : \_\_\_\_\_



\_\_\_\_\_ : \_\_\_\_\_



\_\_\_\_\_ : \_\_\_\_\_



\_\_\_\_\_ : \_\_\_\_\_

Draw the minute hand on the analog clock.

Round One:



1 : 30

Round Two:



2 : 30

Round Three:



7 : 15

Round Four:



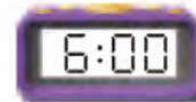
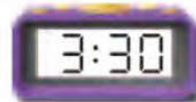
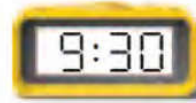
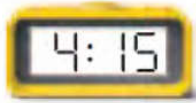
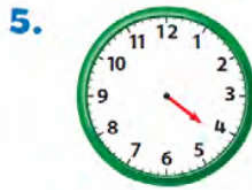
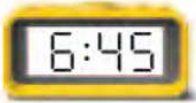
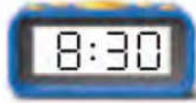
4 : 35

Round Five:



10 : 45

Draw the minute hand to show the time.

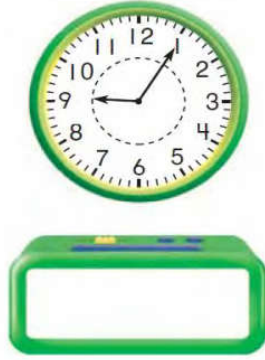


Look at the clock hands. Write the time.

1.



2.



3.



4.



5.



6.



Look at the clock hands. Write the time.

7.



8.



9.



10.



11.



12.





# TABLE 6





# TABLE 7





# TABLE 8





# TABLE 9

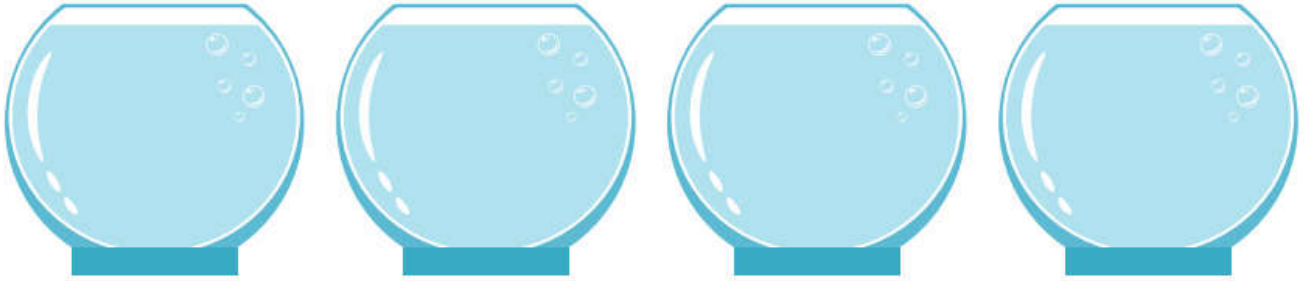


Wanphen Jetha





1. There are 16 fish that need to be placed in 4 bowls. Each bowl must hold the same number of fish. How many fish should be put into each bowl? Draw a picture in the bowls below to solve the problem.



2. Sameh is preparing gift baskets. He has 20 oranges that need to be divided equally between 5 baskets. Draw a picture in the baskets below to solve the problem.



3. The teacher has 36 crayons to share equally between 6 students. She must place the crayons in the cups below. Draw a picture in the cups below to solve the problem.



Directions: Draw a mathematical picture to solve.

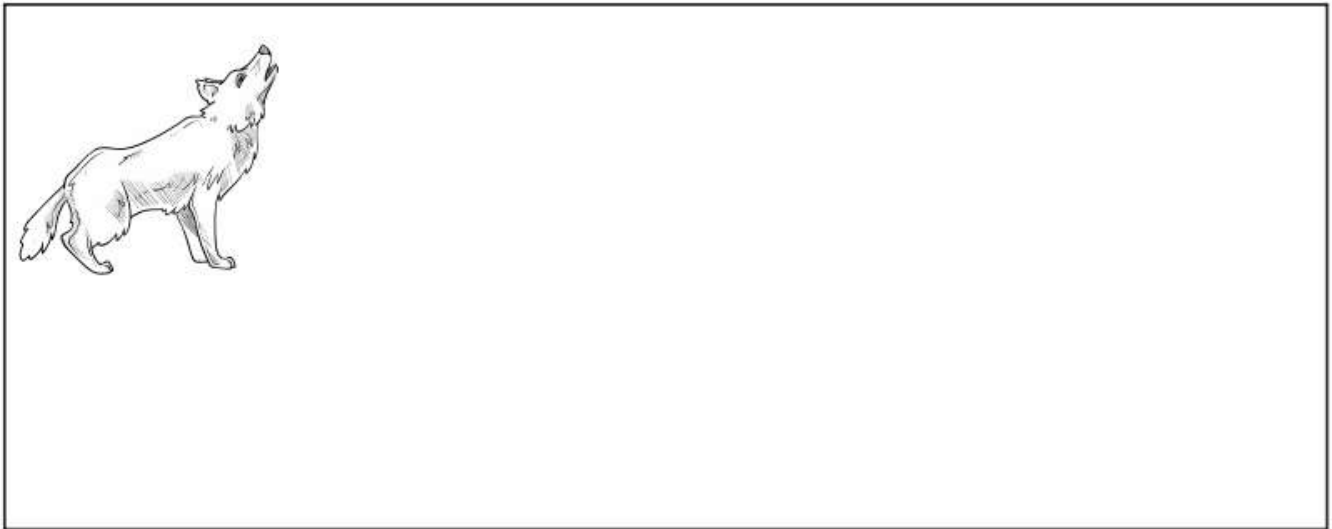
Each cat needs 2 fish for lunch. How many cats can we feed with 12 fish?



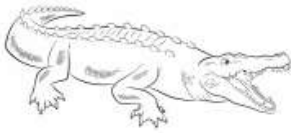
1. Each ibis will eat 3 worms. You have 18 worms. How many ibis can be fed?



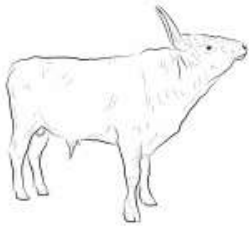
2. Each jackal must eat 6 insects. There are 24 insects. How many jackals can be fed?



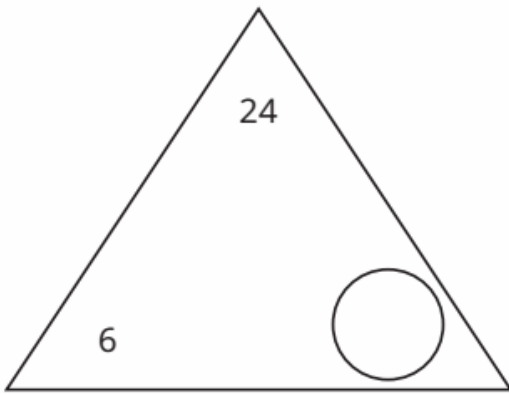
3. Each crocodile wants to eat 5 fish. There are 25 fish. How many crocodiles can be fed?



4. Each bull eats 2 bales of hay each day. There are 100 bales. How many bulls can be fed each day?



Directions: Find the missing factor in the triangles below. Then write the four equations that go with the fact family. Use the counters to help you.

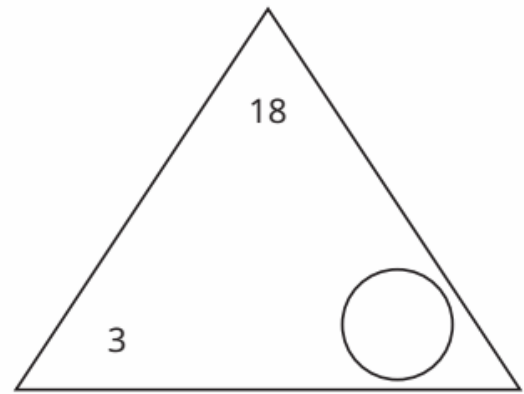


$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

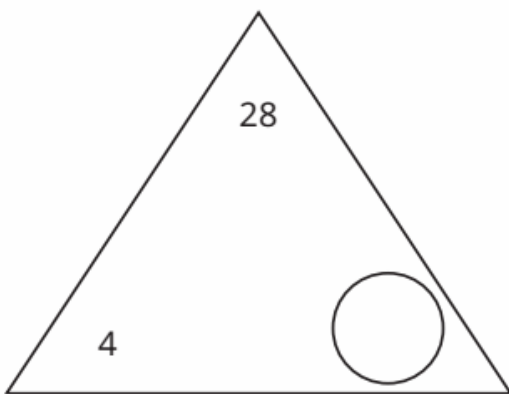


$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

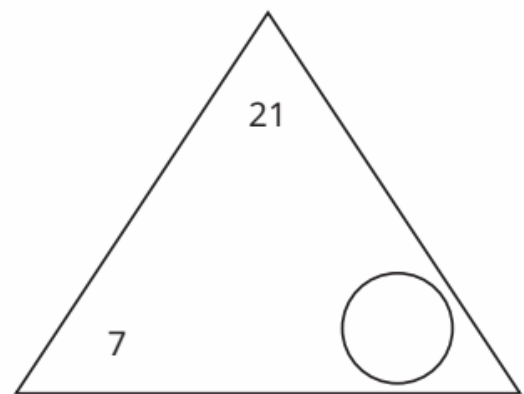


$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$



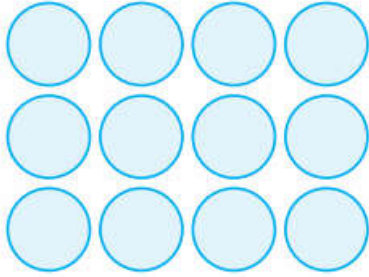
$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

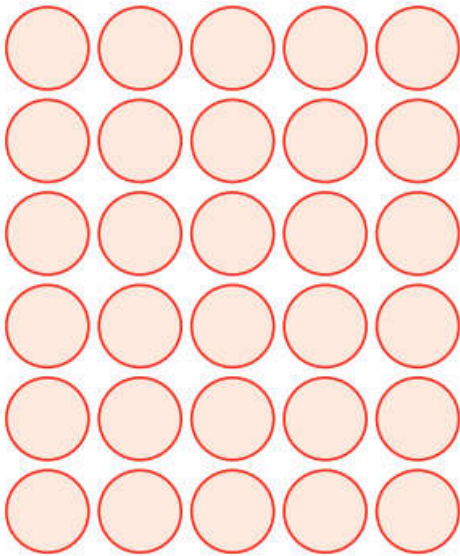
$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

**CHALLENGE:** Describe each of these arrays using one multiplication equation and one division equation.



$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$



$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

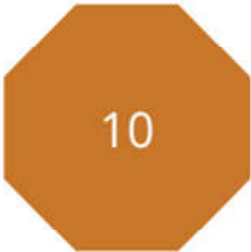
$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$



# Chapter Four

## I POLYGONS

Classify According to the number of vertices:



Category Title: <b>Four Vertices</b>  Square Rectangle	Category Title:
Category Title:	Category Title:
Category Title:	Category Title:



Directions: Find the missing factor by rolling the die or choosing a number card. Record the missing factor in one of the problems below and then solve. When finished, circle the facts that were the easiest for you to solve.

### Mystery Multiplication

$1 \times \underline{\quad} = \underline{\quad}$

$2 \times \underline{\quad} = \underline{\quad}$

$3 \times \underline{\quad} = \underline{\quad}$

$4 \times \underline{\quad} = \underline{\quad}$

$5 \times \underline{\quad} = \underline{\quad}$

$6 \times \underline{\quad} = \underline{\quad}$

$7 \times \underline{\quad} = \underline{\quad}$

$8 \times \underline{\quad} = \underline{\quad}$

$9 \times \underline{\quad} = \underline{\quad}$

$10 \times \underline{\quad} = \underline{\quad}$

$11 \times \underline{\quad} = \underline{\quad}$

$12 \times \underline{\quad} = \underline{\quad}$



Quadrilaterals are named by their sides and their angles.

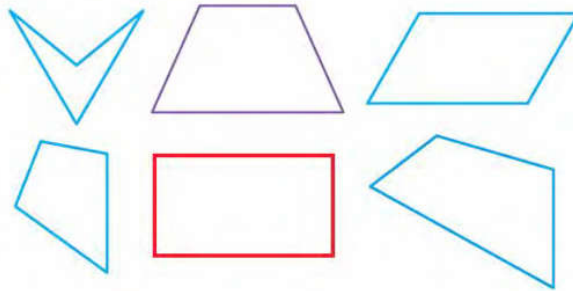


Describe quadrilaterals.

quadrilateral

\_\_\_\_\_ sides

\_\_\_\_\_ angles

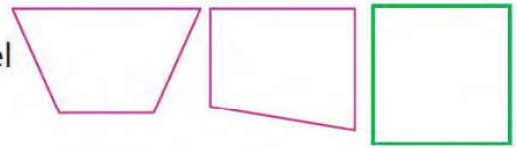


**ERROR Alert**

Some quadrilaterals cannot be classified as a trapezium, rectangle, square, or rhombus.

**trapezium**

at least \_\_\_\_\_ pair of opposite sides that are parallel  
lengths of sides could be the same

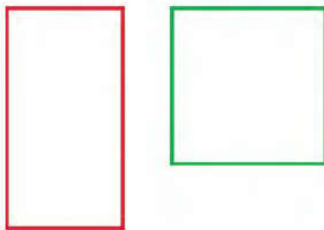


**rectangle**

\_\_\_\_\_ pairs of opposite sides that are parallel

\_\_\_\_\_ pairs of sides that are of equal length

\_\_\_\_\_ right angles



**square**

\_\_\_\_\_ pairs of opposite sides that are parallel

\_\_\_\_\_ sides that are of equal length

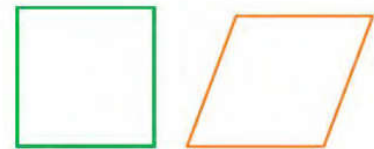
\_\_\_\_\_ right angles



**rhombus**

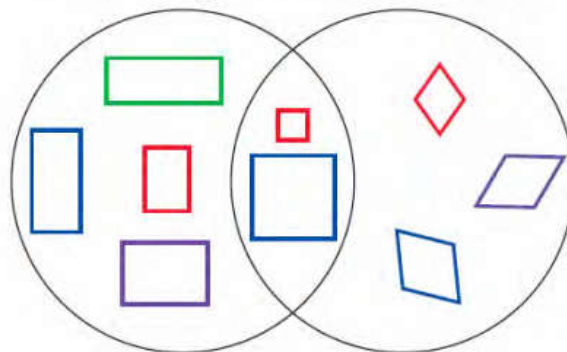
\_\_\_\_\_ pairs of opposite sides that are parallel

\_\_\_\_\_ sides that are of equal length



Rectangles

Rhombuses



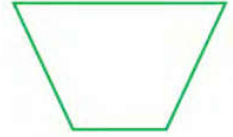
Circle all the words that describe the quadrilateral.



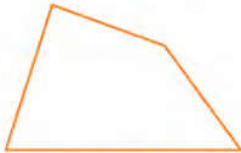
- rectangle
- rhombus
- square
- trapezium



- rhombus
- quadrilateral
- square
- rectangle



- rectangle
- rhombus
- trapezium
- quadrilateral



- rectangle
- trapezium
- quadrilateral
- rhombus



- rectangle
- rhombus
- trapezium
- square

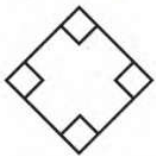


- quadrilateral
- square
- rectangle
- rhombus



Circle all the words that describe the quadrilateral.

1.



- square
- rectangle
- rhombus
- trapezium

2.



- square
- rectangle
- rhombus
- trapezium

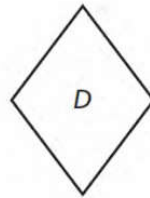
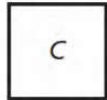
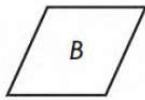
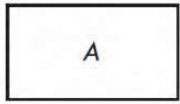
3.



- square
- rectangle
- rhombus
- trapezium



Use the quadrilaterals below for 4-6.



4. Which quadrilaterals appear to have no right angles?

\_\_\_\_\_

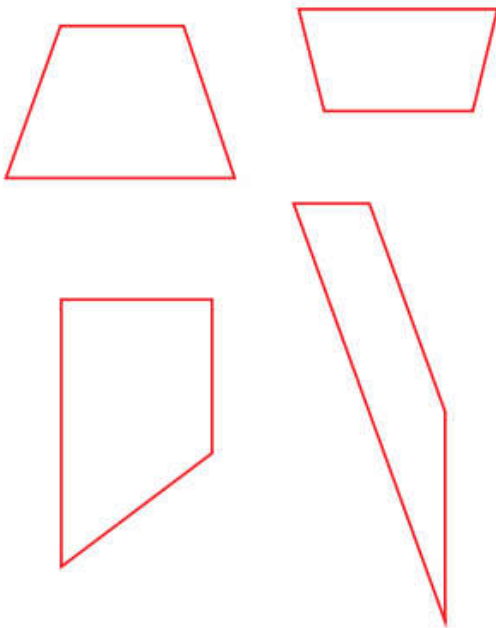
5. Which quadrilaterals appear to have 4 right angles?

\_\_\_\_\_

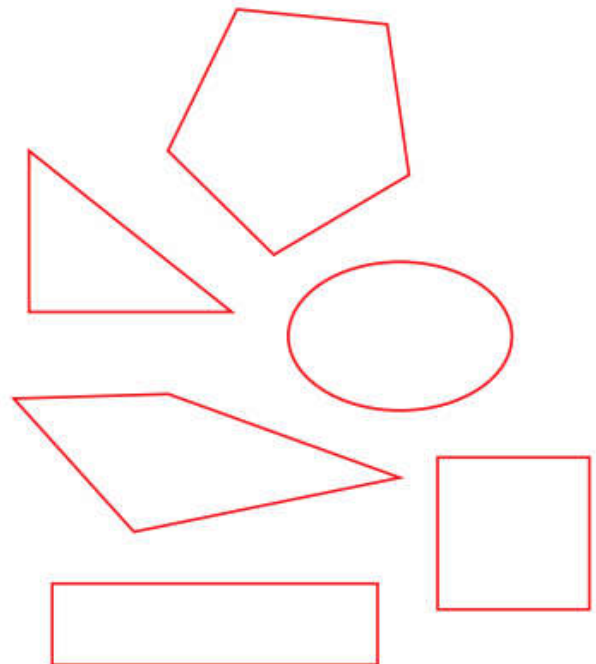
6. Which quadrilaterals appear to have 4 sides of equal length?

\_\_\_\_\_

These are trapeziums.



These are not trapeziums.



Directions: Find the missing factor by rolling the die or choosing a number card. Record the missing factor in one of the problems below and then solve. When finished, draw a rhombus around the fact that was the most challenging and a trapezium around the easiest fact.

### Mystery Multiplication

$$1 \times \underline{\quad} = \underline{\quad}$$

$$2 \times \underline{\quad} = \underline{\quad}$$

$$3 \times \underline{\quad} = \underline{\quad}$$

$$4 \times \underline{\quad} = \underline{\quad}$$

$$5 \times \underline{\quad} = \underline{\quad}$$

$$6 \times \underline{\quad} = \underline{\quad}$$

$$7 \times \underline{\quad} = \underline{\quad}$$

$$8 \times \underline{\quad} = \underline{\quad}$$

$$9 \times \underline{\quad} = \underline{\quad}$$

$$10 \times \underline{\quad} = \underline{\quad}$$

$$11 \times \underline{\quad} = \underline{\quad}$$

$$12 \times \underline{\quad} = \underline{\quad}$$

Work space:



## 2 THE AREA

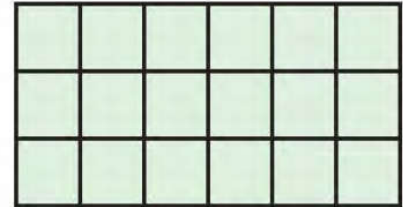
Cristina has a garden that is shaped like the rectangle below. Each unit square represents 1 square meter. What is the area of her garden?

**One Way** Count unit squares.

Count the number of unit squares in all.

There are \_\_\_\_\_ unit squares.

So, the area is \_\_\_\_\_ square meters.

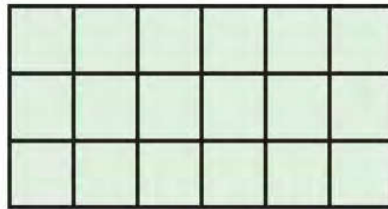


**Other Ways**

**A** Use repeated addition.

Count the number of rows. Count the number of unit squares in each row.

\_\_\_\_\_ rows of \_\_\_\_\_ =  $\blacksquare$



\_\_\_\_\_ unit squares

\_\_\_\_\_ unit squares

\_\_\_\_\_ unit squares

Write an addition equation.

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

So, the area is \_\_\_\_\_ square meters.

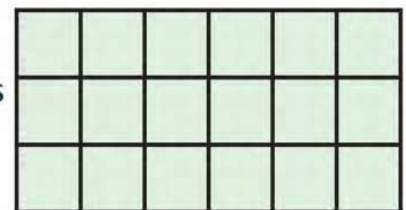
**B** Use multiplication.

Count the number of rows. Count the number of unit squares in each row.

\_\_\_\_\_ rows of \_\_\_\_\_ =  $\blacksquare$

\_\_\_\_\_ unit squares in each row

\_\_\_\_\_ rows



This rectangle is like an array. How do you find the total number of squares in an array?

\_\_\_\_\_

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

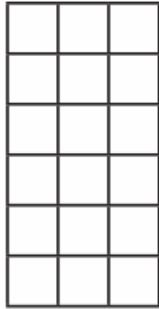
Write a multiplication equation.

So, the area is \_\_\_\_\_ square meters.



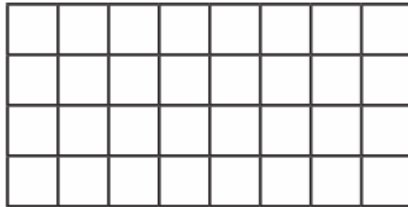
Directions: Determine the area of each rectangle.

Rectangle #1:



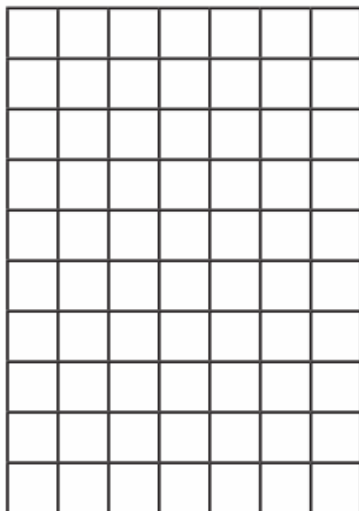
Total area = \_\_\_\_\_ square units

Rectangle #2:



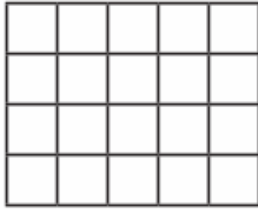
Total area = \_\_\_\_\_ square units

Rectangle #3:



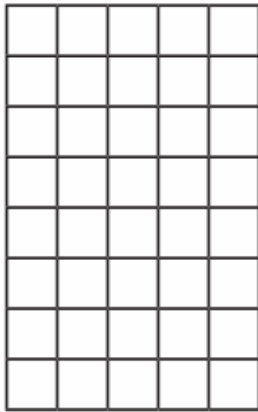
Total area = \_\_\_\_\_ square units

Rectangle #4:



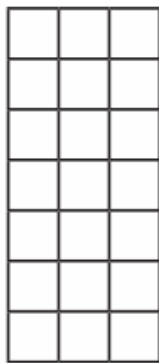
Total area = \_\_\_\_\_ square units

Rectangle #5:



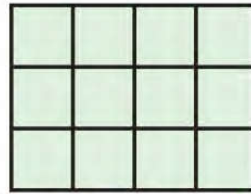
Total area = \_\_\_\_\_ square units

Rectangle #6:



Total area = \_\_\_\_\_ square units

1. Look at the figure.



\_\_\_\_\_ rows of \_\_\_\_\_ = 

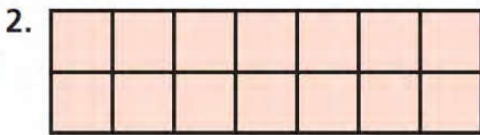
Add. \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Multiply. \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

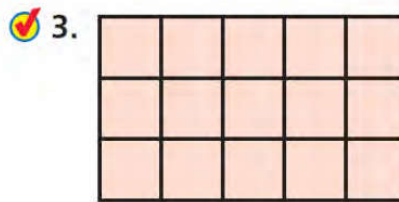
What is the area of the figure?

\_\_\_\_\_ square units

**Find the area of the figure.**  
Each unit square is 1 square foot.

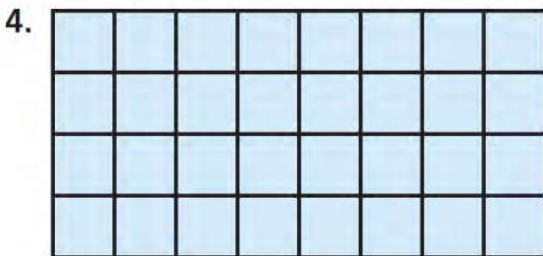


\_\_\_\_\_

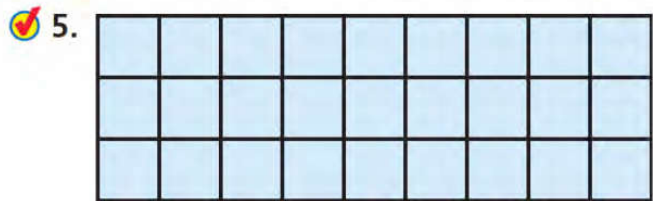


\_\_\_\_\_

**Find the area of the figure.**  
Each unit square is 1 square meter.

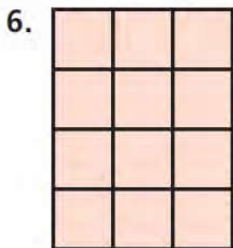


\_\_\_\_\_

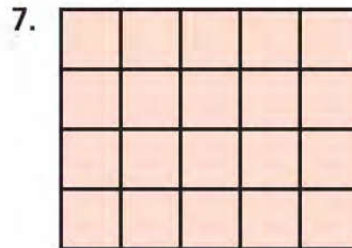


\_\_\_\_\_

**Find the area of the figure.**  
Each unit square is 1 square foot.



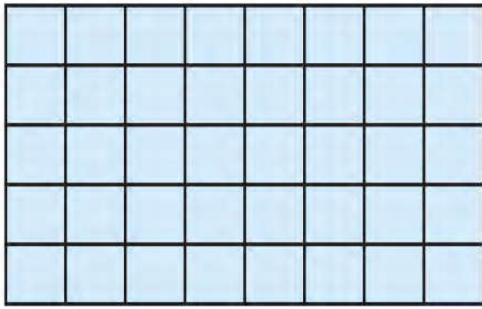
\_\_\_\_\_



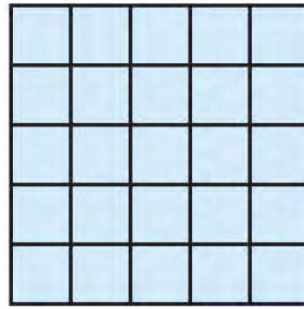
\_\_\_\_\_



8.



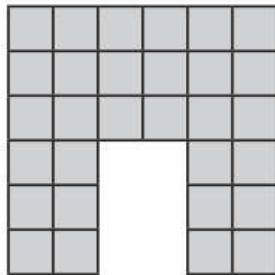
9.



## CHALLENGE:

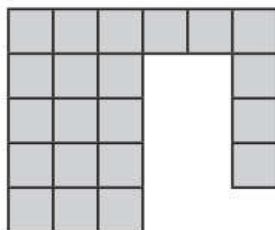
These gardens are not rectangular. Can you find the area anyway?  
Show your thinking.

Problem 1:



Total area = \_\_\_\_\_ square units

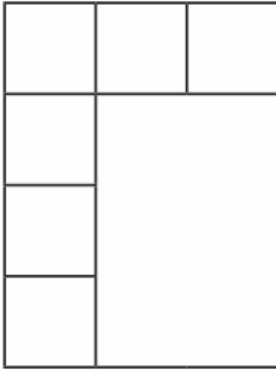
Problem 2:



Total area = \_\_\_\_\_ square units

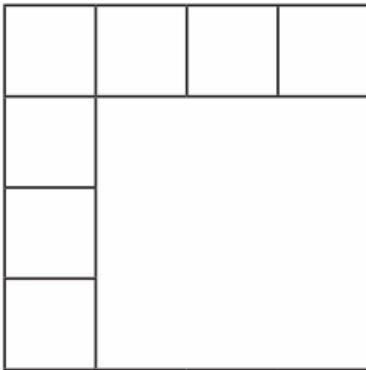
Directions: Determine the total area of each shape.

Rectangle #1:



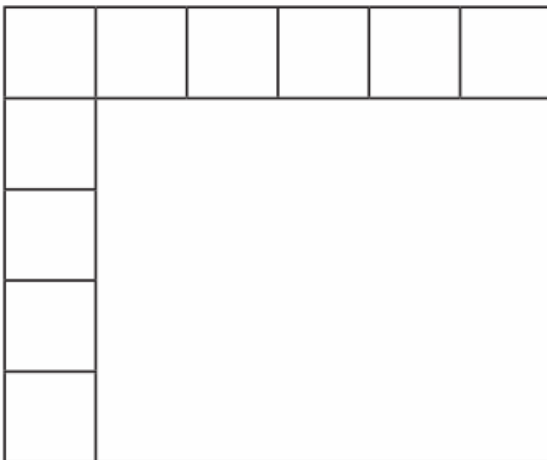
Total area = \_\_\_\_\_ square units

Rectangle #2:



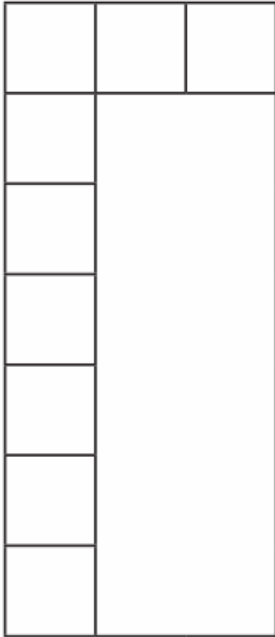
Total area = \_\_\_\_\_ square units

Rectangle #3:



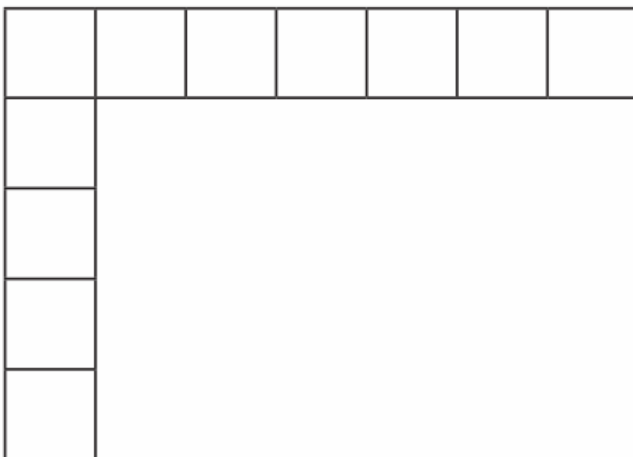
Total area = \_\_\_\_\_ square units

Rectangle #4:



Total area = \_\_\_\_\_ square units

Rectangle #5:



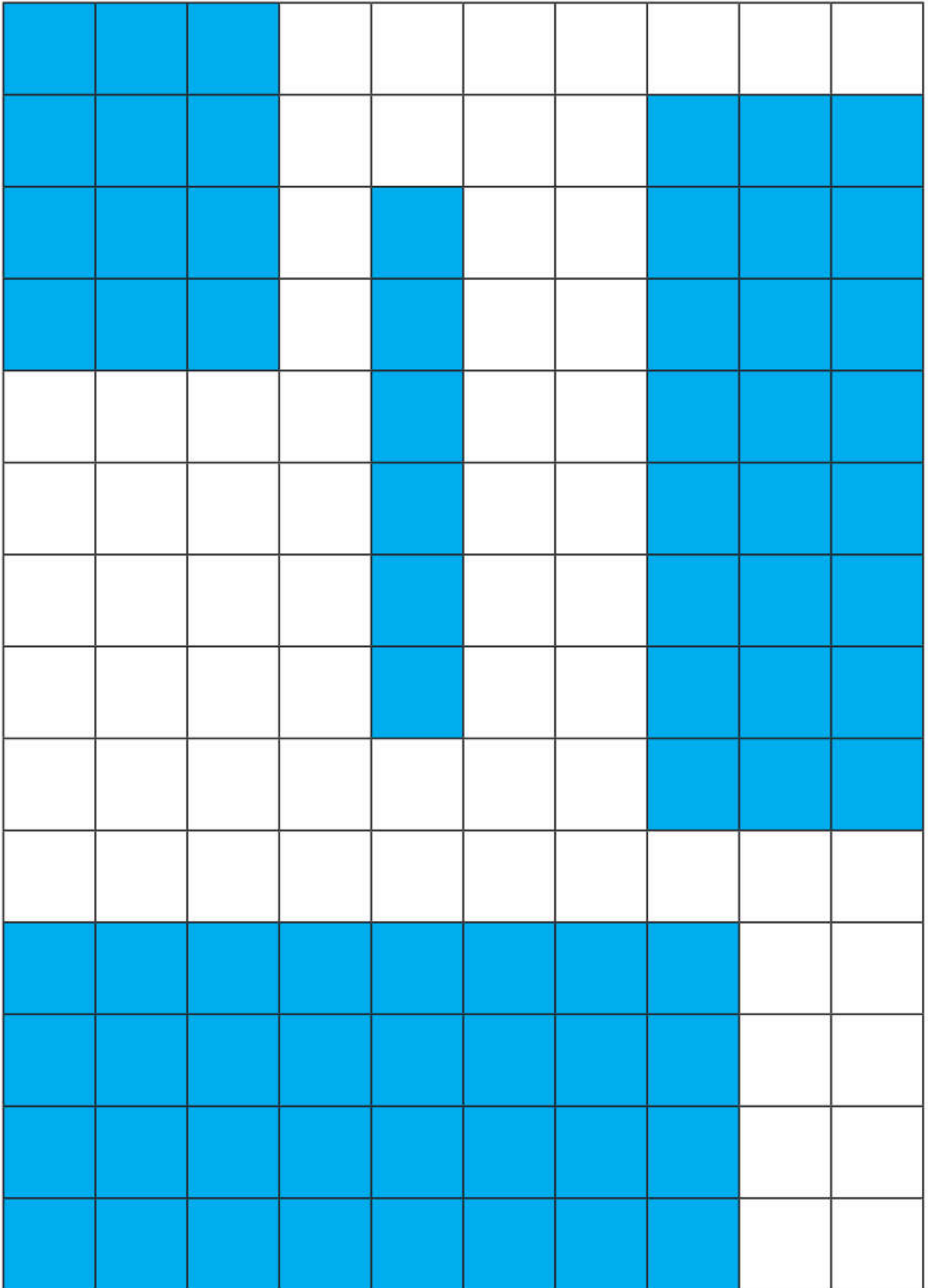
Total area = \_\_\_\_\_ square units

Rectangle #6:



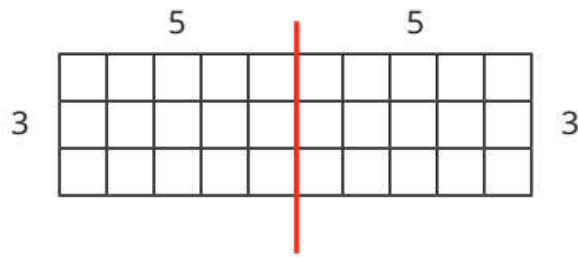
Total area = \_\_\_\_\_ square units

**CHALLENGE:** Determine the total area of the following shapes.

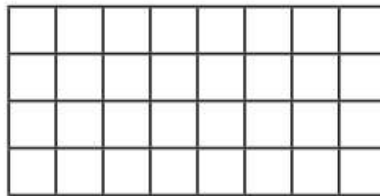


Directions: Split the arrays below into at least 2 smaller arrays. Label the factors for each part. An example is shown below.

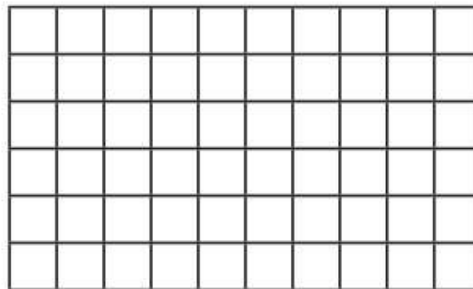
Example



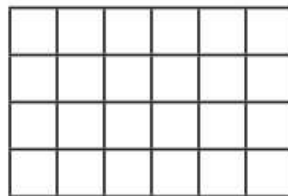
Problem #1



Problem #2

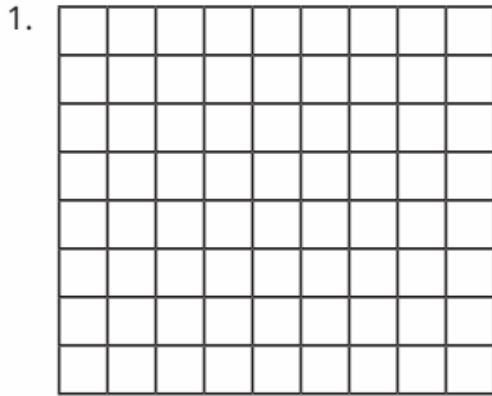


Problem #3



# 3 DISTRIBUTION PROPERTY

Directions: Break apart the arrays and, using the distributive property, write an equation to show your work.

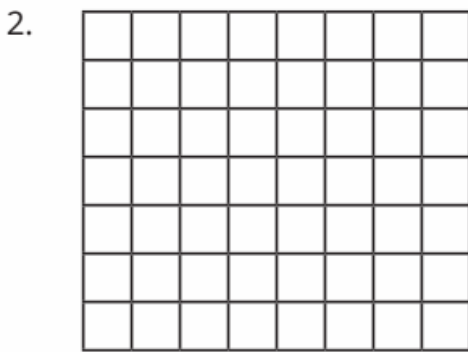


$$\underline{\quad} \times \underline{\quad} = \square$$

$$\underline{\quad} \times \underline{\quad} = \square$$

$$\square + \square = \bigcirc$$

$$8 \times 9 = \underline{\quad}$$

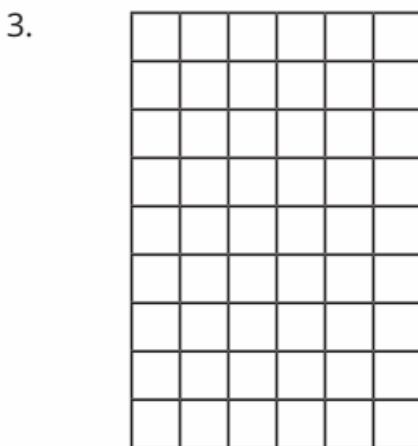


$$\underline{\quad} \times \underline{\quad} = \square$$

$$\underline{\quad} \times \underline{\quad} = \square$$

$$\square + \square = \bigcirc$$

$$7 \times 8 = \underline{\quad}$$



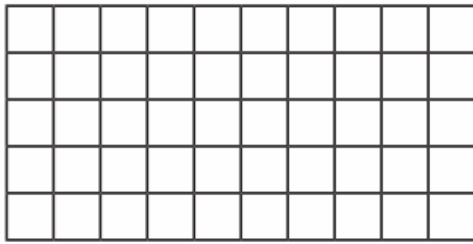
$$\underline{\quad} \times \underline{\quad} = \square$$

$$\underline{\quad} \times \underline{\quad} = \square$$

$$\square + \square = \bigcirc$$

$$9 \times 6 = \underline{\quad}$$

4.



$$\underline{\quad} \times \underline{\quad} = \square$$

$$\underline{\quad} \times \underline{\quad} = \square$$

$$\square + \square = \bigcirc$$

$$5 \times 10 = \underline{\quad}$$

5.



$$\underline{\quad} \times \underline{\quad} = \square$$

$$\underline{\quad} \times \underline{\quad} = \square$$

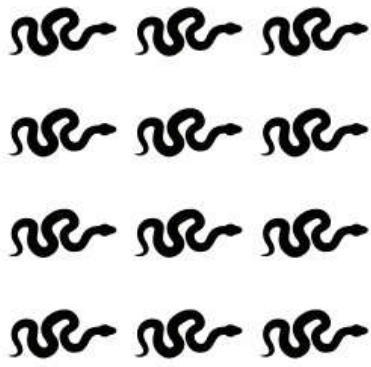
$$\square + \square = \bigcirc$$

$$8 \times 2 = \underline{\quad}$$

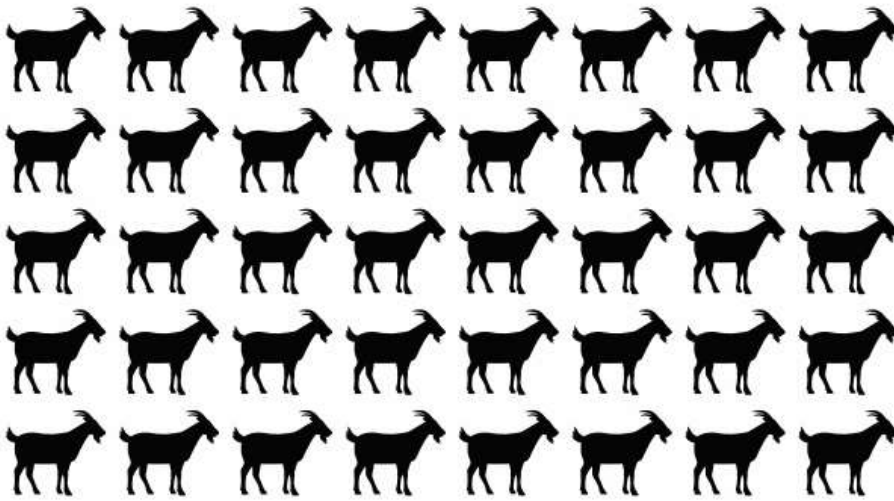
Directions: Break up the following arrays in as many different ways as possible. Use different colors to keep track of your different arrays. Then select the one that is most helpful to you as a mathematician and write the equations that match it in the box.



Equations:



Equations:



Equations:





Equations:

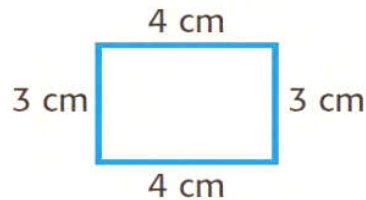


Equations:

# Chapter Five

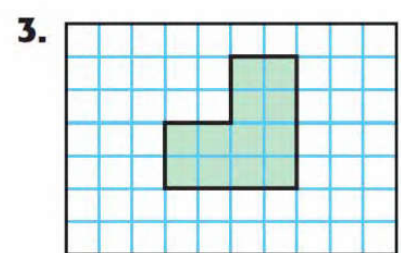
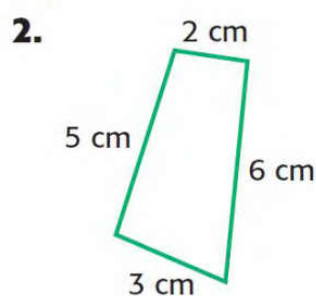
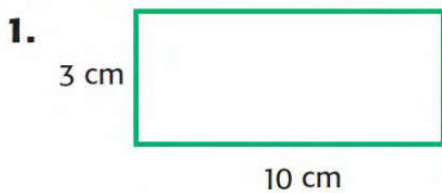
## I PERIMETER

The perimeter of a polygon is the sum of the side lengths.



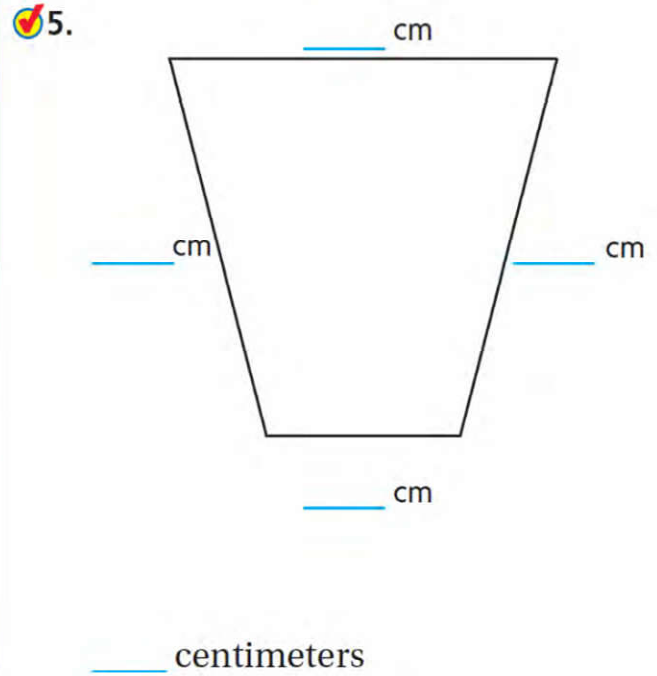
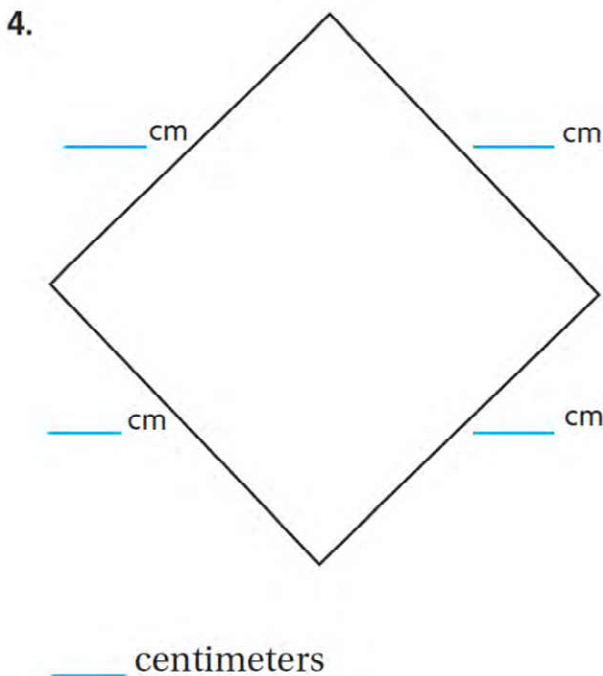
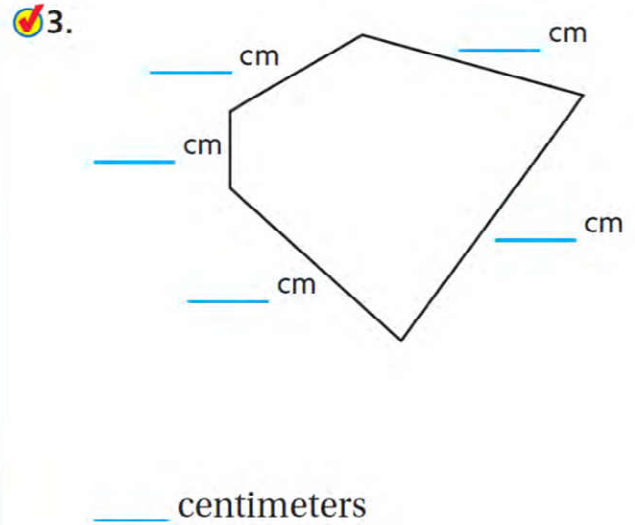
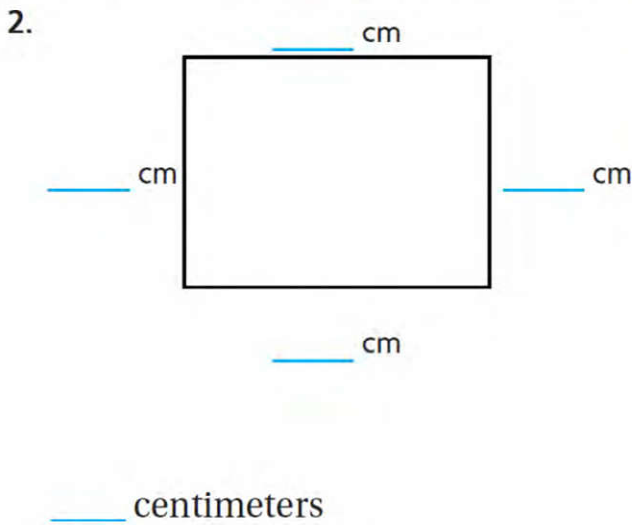
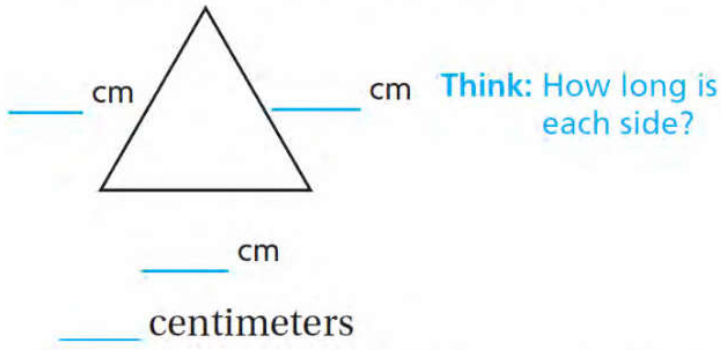
$$\begin{aligned} \text{Perimeter} &= 3 \text{ cm} + 4 \text{ cm} + 3 \text{ cm} + 4 \text{ cm} \\ &= 14 \text{ cm} \end{aligned}$$

Find the perimeter of each figure:

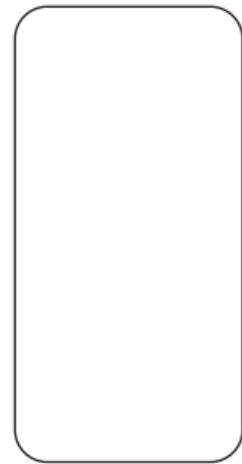
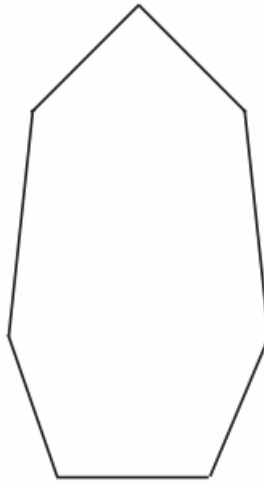
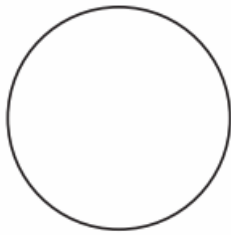
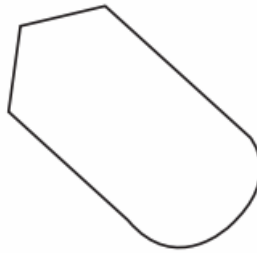
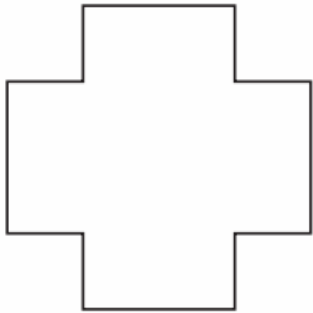
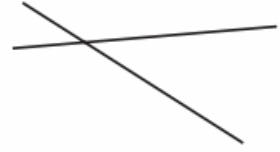
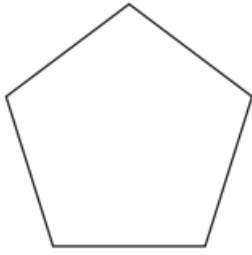


- (1) .....
- (2) .....
- (3) .....

Using your ruler, find the perimeter of each figure:



Directions: Look at the shapes below. Circle the shapes that are polygons and cross out the shapes that are NOT polygons.



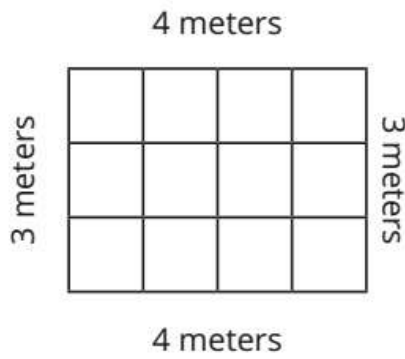
Directions: Work with your Shoulder Partner to solve the perimeter and area problems below. Your teacher will give you additional directions.

**Goat Pen**



Perimeter = \_\_\_\_\_ meters      Area = \_\_\_\_\_ square meters

**Work Space**

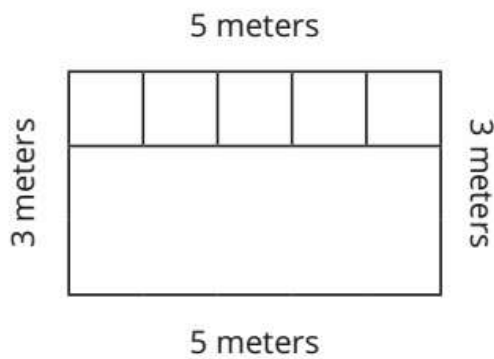


**Chicken Pen**



Perimeter = \_\_\_\_\_ meters      Area = \_\_\_\_\_ square meters

**Work Space**

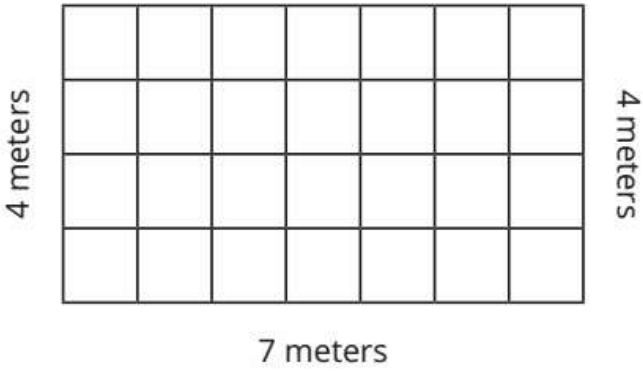


**A New  
Goat Pen**



7 meters

**Work Space**



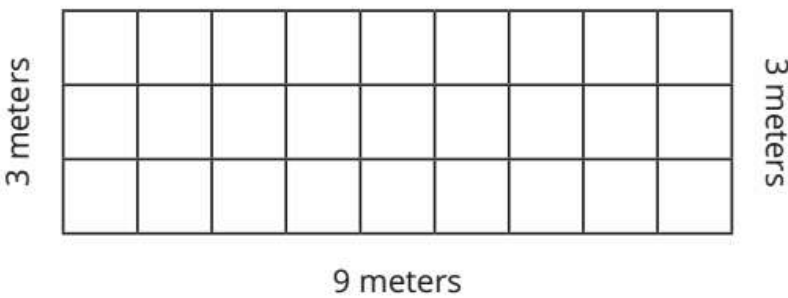
Perimeter = \_\_\_\_\_ meters      Area = \_\_\_\_\_ square meters

**Cattle Pen**



9 meters

**Work Space**



Perimeter = \_\_\_\_\_ meters      Area = \_\_\_\_\_ square meters

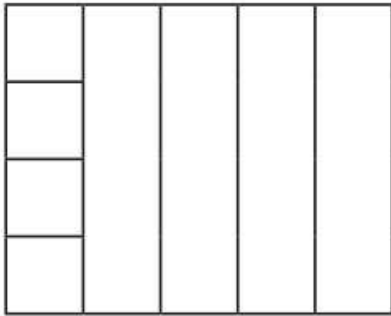


Duck Pen



5 meters

4 meters



5 meters

Work Space

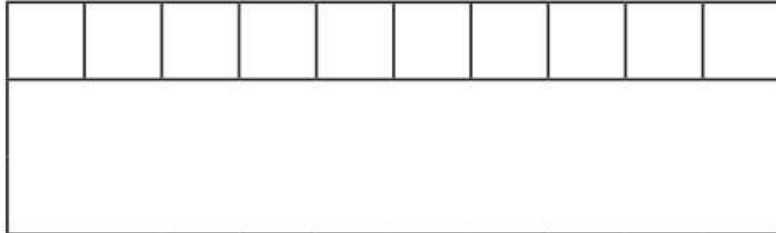
Perimeter = \_\_\_\_\_ meters      Area = \_\_\_\_\_ square meters

Sheep Pen



10 meters

3 meters



3 meters

10 meters

Work Space

Perimeter = \_\_\_\_\_ meters      Area = \_\_\_\_\_ square meters



**2 DIVISION**

Directions: Use counters to solve the division problems below. For each problem, draw a picture to show your solution.

1.  $36 \div 6 =$

2.  $21 \div 3 =$

3.  $48 \div 12 =$



Directions: Use counters to solve the division problems below. For each problem draw a picture to show your solution.

1.  $27 \div 3 =$

2.  $44 \div 11 =$

3.  $36 \div 9 =$

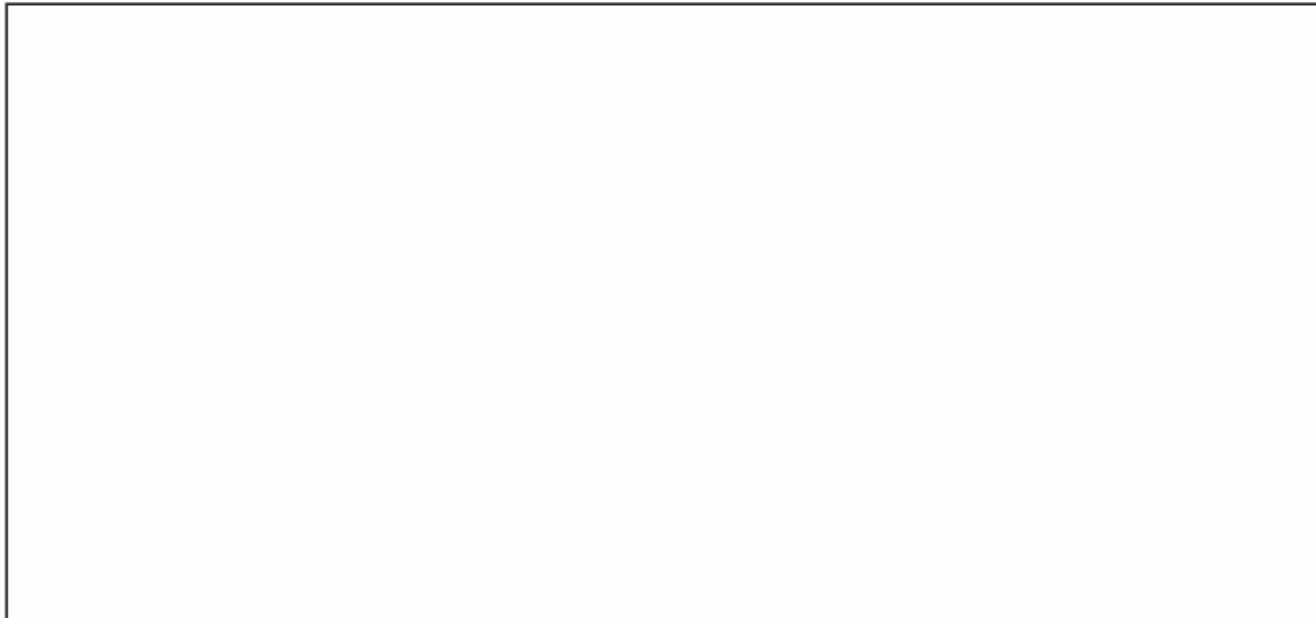


**Part 1 Directions:** Solve the story problems below. Include a drawing and an equation for each problem. Be sure to label your answers.

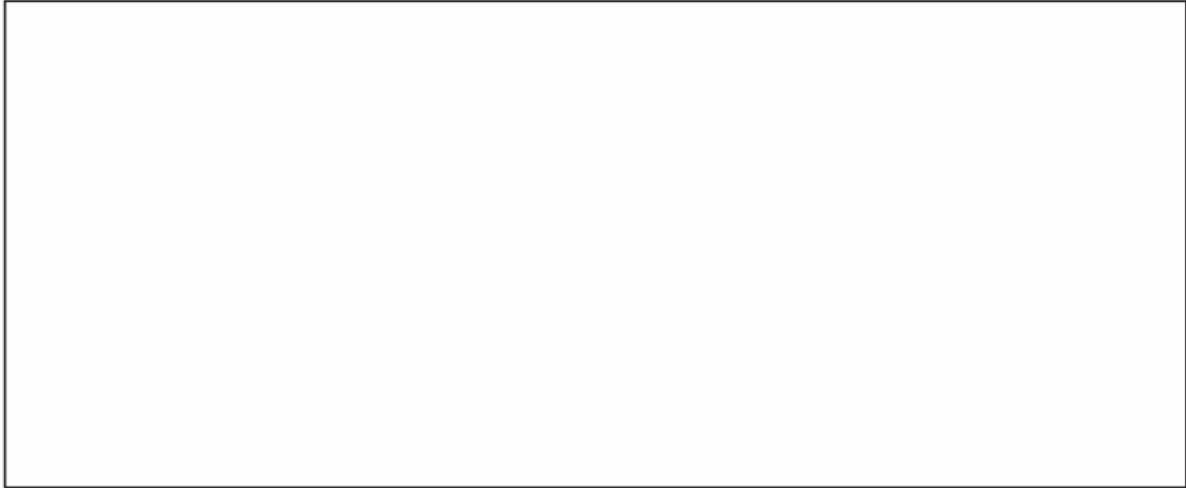
1. Shaimaa is sewing a border on a square baby blanket. The length of the blanket is 45 centimeters and the width is 45 centimeters. How long will the border be?



2. Farouk is building a patio out of tiles. He wants the length of the patio to be 7 tiles across and its width to be 6 tiles. How many tiles will he use in all to build the patio?



3. Omnia wants to put a wooden trim around her window. The window is 4 meters tall and 1 meter wide. How much wood does she need for the trim?



4. A farmer is building a fence around his garden. If the garden is 8 meters long and 3 meters wide, how much fencing does he need to buy?

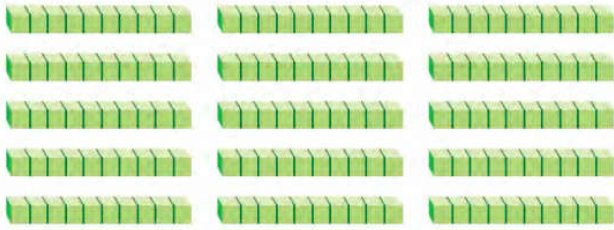


5. A rug is 3 meters long and 2 meters wide. What is the area of the rug?



# 3 MULTIPLICATION STRATEGIES

**MODEL**



**THINK**

$$5 \times 30 = 5 \times \underline{\quad} \text{ tens}$$

$$= \underline{\quad} \text{ tens} = \underline{\quad}$$

So,  $5 \times 30 = \underline{\quad}$ .

Use the place value to find the product:

- (1)  $5 \times 70 = 5 \times \dots \text{ tens} = \dots \text{ tens} = \dots$
- (2)  $4 \times 60 = 4 \times \dots \text{ tens} = \dots \text{ tens} = \dots$
- (3)  $2 \times 80 = 2 \times \dots \text{ tens} = \dots \text{ tens} = \dots$
- (4)  $5 \times 60 = 5 \times \dots \text{ tens} = \dots \text{ tens} = \dots$
- (5)  $3 \times 40 = 3 \times \dots \text{ tens} = \dots \text{ tens} = \dots$
- (6)  $3 \times 70 = 3 \times \dots \text{ tens} = \dots \text{ tens} = \dots$
- (7)  $8 \times 40 = 8 \times \dots \text{ tens} = \dots \text{ tens} = \dots$
- (8)  $6 \times 90 = 6 \times \dots \text{ tens} = \dots \text{ tens} = \dots$
- (9)  $9 \times 10 = 9 \times \dots \text{ tens} = \dots \text{ tens} = \dots$
- (10)  $8 \times 20 = 8 \times \dots \text{ tens} = \dots \text{ tens} = \dots$
- (11)  $7 \times 40 = 7 \times \dots \text{ tens} = \dots \text{ tens} = \dots$
- (12)  $3 \times 50 = 3 \times \dots \text{ tens} = \dots \text{ tens} = \dots$
- (13)  $4 \times 40 = 4 \times \dots \text{ tens} = \dots \text{ tens} = \dots$
- (14)  $2 \times 300 = 2 \times \dots \text{ hundreds} = \dots \text{ hundreds} = \dots$
- (15)  $3 \times 400 = 3 \times \dots \text{ hundreds} = \dots \text{ hundreds} = \dots$

# Chapter Six

Directions: Solve the problems below. Split the multiples of 10 into 10 and the other factor. For example, 40 has the factors 10 and 4.

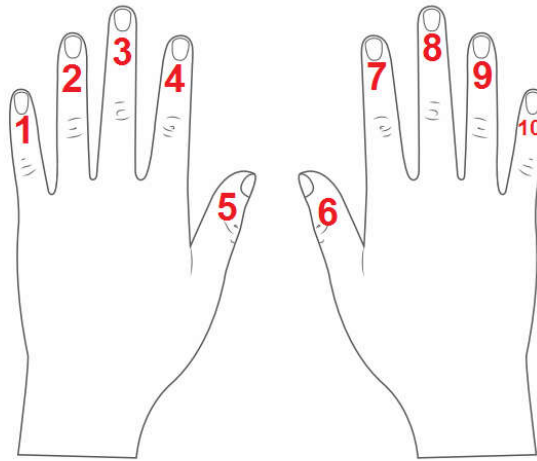
Example:

$$8 \times 40$$

$$(8 \times 4) \times 10 = 320$$

$3 \times 90$  $( \quad \times \quad ) \times 10 =$	$4 \times 80$  $( \quad \times \quad ) \times 10 =$
$9 \times 20$  $( \quad \times \quad ) \times 10 =$	$6 \times 30$  $( \quad \times \quad ) \times 10 =$
$8 \times 50$  $( \quad \times \quad ) \times 10 =$	$7 \times 30$  $( \quad \times \quad ) \times 10 =$
$6 \times 70$  $( \quad \times \quad ) \times 10 =$	$5 \times 40$  $( \quad \times \quad ) \times 10 =$

# MULTIPLY BY 9 STRATEGY



Directions: Shade in all the multiples of 9. Next to the chart, record what patterns you notice.

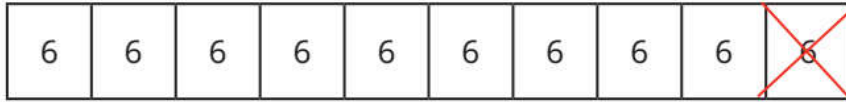
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

Describe the patterns you observe.

Directions: You can use what you know about multiplying by 10 to quickly multiply by 9. Look at the example below. Solve and discuss each problem with your group.

$$9 \times 6$$

First draw a model of  $10 \times 6$  and then cross out one group of 6. Now there are 9 groups of 6.



$$10 \times 6 = 60$$

$$60 - 6 = \underline{\quad\quad\quad} \quad \text{so } 9 \times 6 = \underline{\quad\quad\quad}$$

$$9 \times 5$$



$$10 \times 5 = \underline{\quad\quad\quad} \quad \text{so } 9 \times 5 = \underline{\quad\quad\quad}$$

$$9 \times 7$$



$$10 \times 7 = \underline{\quad\quad\quad} \quad \text{so } 9 \times 7 = \underline{\quad\quad\quad}$$

$$9 \times 3$$



$$10 \times 3 = \underline{\quad\quad\quad} \quad \text{So } 9 \times 3 = \underline{\quad\quad\quad}$$

Directions: When your teacher gives the signal, solve as many problems as you can in 2 minutes. Use any strategy you learned in Lesson 52.

$9 \times 2 = \underline{\quad}$

$4 \times 9 = \underline{\quad}$

$9 \times 1 = \underline{\quad}$

$9 \times 0 = \underline{\quad}$

$9 \times 10 = \underline{\quad}$

$9 \times 2 = \underline{\quad}$

$3 \times 9 = \underline{\quad}$

$9 \times 5 = \underline{\quad}$

$9 \times 0 = \underline{\quad}$

$9 \times 7 = \underline{\quad}$

$9 \times 9 = \underline{\quad}$

$8 \times 9 = \underline{\quad}$

$1 \times 9 = \underline{\quad}$

$9 \times 0 = \underline{\quad}$

$6 \times 9 = \underline{\quad}$

$9 \times 4 = \underline{\quad}$

$9 \times 2 = \underline{\quad}$

$9 \times 10 = \underline{\quad}$

$9 \times 5 = \underline{\quad}$

$9 \times 8 = \underline{\quad}$

$2 \times 9 = \underline{\quad}$

$9 \times 6 = \underline{\quad}$

$1 \times 9 = \underline{\quad}$

$9 \times 3 = \underline{\quad}$

$9 \times 8 = \underline{\quad}$

$9 \times 6 = \underline{\quad}$

$4 \times 9 = \underline{\quad}$

$10 \times 9 = \underline{\quad}$

$9 \times 7 = \underline{\quad}$

$9 \times 0 = \underline{\quad}$

Gamila said that since 9 is the digit with the largest value, the number 999 is larger than 1000. Do you agree or disagree? Why?



$7 \times 2 = \underline{\hspace{2cm}}$

$3 \times 9 = \underline{\hspace{2cm}}$

$10 + 1 = \underline{\hspace{2cm}}$

$6 \times 0 = \underline{\hspace{2cm}}$

$4 \times 3 = \underline{\hspace{2cm}}$

$2 \times 3 = \underline{\hspace{2cm}}$

$3 + 9 = \underline{\hspace{2cm}}$

$6 + 5 = \underline{\hspace{2cm}}$

$0 + 10 = \underline{\hspace{2cm}}$

$1 \times 7 = \underline{\hspace{2cm}}$

$9 + 9 = \underline{\hspace{2cm}}$

$8 \times 0 = \underline{\hspace{2cm}}$

$1 + 9 = \underline{\hspace{2cm}}$

$9 \times 9 = \underline{\hspace{2cm}}$

$6 + 5 = \underline{\hspace{2cm}}$

$2 \times 4 = \underline{\hspace{2cm}}$

$4 \times 2 = \underline{\hspace{2cm}}$

$3 + 10 = \underline{\hspace{2cm}}$

$9 \times 6 = \underline{\hspace{2cm}}$

$6 + 6 = \underline{\hspace{2cm}}$

$2 \times 6 = \underline{\hspace{2cm}}$

$3 + 9 = \underline{\hspace{2cm}}$

$3 + 3 = \underline{\hspace{2cm}}$

$7 + 3 = \underline{\hspace{2cm}}$

$10 \times 8 = \underline{\hspace{2cm}}$

$2 \times 10 = \underline{\hspace{2cm}}$

$0 + 4 = \underline{\hspace{2cm}}$

$3 + 9 = \underline{\hspace{2cm}}$

$9 + 10 = \underline{\hspace{2cm}}$

$6 \times 0 = \underline{\hspace{2cm}}$

$4 \times 8 = \underline{\hspace{2cm}}$

$2 \times 10 = \underline{\hspace{2cm}}$

$0 + 4 = \underline{\hspace{2cm}}$

$1 \times 1 = \underline{\hspace{2cm}}$

$6 + 1 = \underline{\hspace{2cm}}$

$8 \times 8 = \underline{\hspace{2cm}}$

$3 \times 3 = \underline{\hspace{2cm}}$

$5 \times 10 = \underline{\hspace{2cm}}$

$5 + 5 = \underline{\hspace{2cm}}$

$6 \times 1 = \underline{\hspace{2cm}}$

$9 \times 6 = \underline{\hspace{2cm}}$

$9 \times 0 = \underline{\hspace{2cm}}$

$10 \times 0 = \underline{\hspace{2cm}}$

$5 \times 10 = \underline{\hspace{2cm}}$

$6 + 2 = \underline{\hspace{2cm}}$

$2 + 9 = \underline{\hspace{2cm}}$

$0 + 10 = \underline{\hspace{2cm}}$

$1 \times 2 = \underline{\hspace{2cm}}$

$5 \times 8 = \underline{\hspace{2cm}}$

$2 \times 3 = \underline{\hspace{2cm}}$

$4 + 4 = \underline{\hspace{2cm}}$

$8 + 9 = \underline{\hspace{2cm}}$

$9 + 6 = \underline{\hspace{2cm}}$

$6 \times 7 = \underline{\hspace{2cm}}$

$0 \times 8 = \underline{\hspace{2cm}}$

$9 \times 10 = \underline{\hspace{2cm}}$

$10 + 4 = \underline{\hspace{2cm}}$

$2 \times 5 = \underline{\hspace{2cm}}$

$1 + 10 = \underline{\hspace{2cm}}$

$4 \times 2 = \underline{\hspace{2cm}}$

**Puzzle 1:**

This number has 5 Thousands, 7 Hundreds, 6 Tens, and 4 Ones. What number is it?

---

**Puzzle 2:**

This number has 12 Hundreds, 15 Tens, and 6 ones. What number is it?

---

**Puzzle 3:**

Write the following number in standard form. Pay attention to the place value.

$$6,000 + 50,000 + 40 + 300 + 2 =$$

---

**Puzzle 4:**

Write the following number in expanded form.

$$3,509 = \underline{\hspace{15em}}$$

**Puzzle 5:**

Radwa ordered the following numbers from smallest to largest. What did she do incorrectly?

$$5,021 \quad 5,201 \quad 5,102 \quad 5,210$$

Reorder the numbers correctly: \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_

**Puzzle 6:**

Sara compared the numbers below. What is her error?

$$13,470 < 13,407$$

---

PROBLEM	WORK SPACE	SUM
$97 + 184$		
$483 + 201$		
$823 + 262$		
$677 + 233$		
$865 + 337$		



**Data Table 1:** The table below shows the number of students in each grade level in a large school in Cairo. Use this information to answer the questions below.

GRADE	NUMBER OF STUDENTS
P1	272
P2	356
P3	529
P4	487

Questions:

How many students are P1 and P4 all together?

How many students are in P3 and P4 all together?

Fareed says there are more students in P1 and P3 then there are in P2 and P4. Do you agree or disagree? Prove your answer.



**Data Table 2:** The following table shows the length of some of the world's longest rivers. Use the information to answer the questions below.

RIVER	APPROXIMATE LENGTH IN KILOMETERS*
Nile	About 6,650 km
Amazon	About 6,400 km
Mississippi	About 3,775 km
Euphrates	About 2,800 km

\*Source: Encyclopedia Britannica

**Questions:**

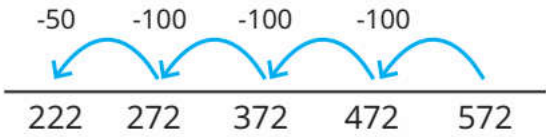
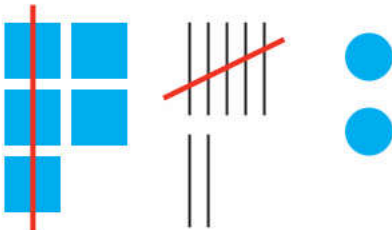
If you laid the Mississippi and the Amazon out in one straight line, about how many kilometers would it cover?

If you were to paddle the entire length of the Euphrates and the Nile, about how many kilometers would you paddle?

If you were to build a path along the entire length of the Mississippi and the Euphrates, about how long would the path be?

**CHALLENGE:** Use the world's rivers chart to determine about how many kilometers you would travel if you decided to raft the length of all four rivers.

Directions: Solve each subtraction problem using any strategy you choose. Then write an addition problem to check your answer. The first one is an example.

SUBTRACTION PROBLEM	ADDITION PROBLEM TO CHECK
<p>Example:</p> $572 - 350 = 222$ <p>Work:</p> <p><i>Number Line</i></p>  <p><i>Place Value Picture</i></p> 	<p>Example:</p> $222 + 350 = 572$ $200 + 300 = 500$ $22 + 50 = 72$ $500 + 72 = 572$
<p>1. <math>780 - 450 =</math></p> <p>Work:</p>	
<p>2. <math>925 - 610 =</math></p> <p>Work:</p>	

SUBTRACTION PROBLEM	ADDITION PROBLEM TO CHECK
3. $2,550 - 1,225 =$ Work:	
4. $3,000 - 1,500 =$ Work:	
5. $5,548 - 3,315 =$ Work:	
6. $1,759 - 1,255 =$ Work:	

# THE CAPACITY

## Liters and Milliliters

We use the graduated cylinder to measure the liquids

Choose the better estimate for the capacity of each.

1.



3 L or 30 mL

2.



1 L or 5 L

3.



14 L or 14 mL

Choose the unit you would use to measure the capacity of each. Write *mL* or *L*.

4. bathtub

5. a spoon

6. a container of milk

Choose the better estimate for the capacity of each.

7.



100 L or 100 mL

8.



20 L or 2 L

9.



200 mL or 200 L

Choose the unit you would use to measure the capacity of each. Write *mL* or *L*.

10. a pail

11. a soup can

12. a drinking glass

13. a pond

14. a small vase

15. a watering can

